Storm Water Pollution Control Plan

New London High School Additions & Renovations
490 Jefferson Ave
New London, Connecticut

Prepared for:

New London High School

55 Church Street
New Haven, CT 06510-3014
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Project #192310898

February 20th, 2020

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Section 1.0 Certifications

Permittee

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable Investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Name	*Title*
Signature	*Date*

Document Preparer

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statutes.

Name	*Title*
Signature	*Date*

Contractor

"I certify under penalty of law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized by this General Permit, and must comply with the terms and conditions of this general permit, Including, but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site."

Name	*Title*
Signature	*Date*

Contractor

Site Location

New London High School
Additions & Renovations
490 Jefferson Ave
New London, CT

Professional Engineer

"I hereby certify that I am a professional engineer licensed in the State of Connecticut. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by New London High School for an activity located at 490 Jefferson Ave, New London, Connecticut. I certify that I have thoroughly and completely reviewed the Stormwater Pollution Control Plan for the project or activity covered by this certification. I further certify, based on such review and on the standard of care for such projects, that the Stormwater Pollution Control Plan has been prepared in accordance with the Connecticut Guidelines for the Soil Erosion and Sediment Control, as amended, the Stormwater Quality Manual, as amended, and the conditions of the General Permit, and that the controls required for such Plan are appropriate for the site. I further certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement in this certification may subject me to sanction by the Department and/or be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Antonio Di Camillo	*Project Engineer*
Name	*Title*
Signature	*Date*
55 Church Street, Suite 601 *New Haven, CT 06510*	
Mailing Address	

SEAL

Consultant Information

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Contacts:

Mr. Antonio Di Camillo, P.E.

Section 2.0 Introduction

Stantec Consulting Services, Inc. (Stantec) has prepared this Stormwater Pollution Control Plan (SWPCP) for the New London High School for the school's proposed additions and renovations. This SWPCP has been prepared in accordance with the State of Connecticut Department of Energy and Environmental Protection (CT DEEP) General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, effective October 1, 2013 (Permit) and the 2004 Connecticut Stormwater Quality Manual.

This SWPCP is designed to minimize potential pollution caused by soil erosion and sedimentation during and after construction, and potential stormwater pollution caused by use of the Site after construction is completed.

Section 3.0 Site and Project Description

3.1 Site Plan

Site drawings depicting drainage patterns, slopes, areas of soil disturbance, locations of non-structural controls and other pertinent information are included with this SWPCP (see **Attachment 4**).

3.2 Site Description

3.2.1 Nature of the Construction Activity

The original 192,000 SF New London High School was constructed at the corner of Jefferson Avenue and Chester Street in 1969 and consists of three major elements: a four-story academic classroom section; a two-level section housing the auditorium, gymnasium, pool and locker rooms; and a one-story shop wing. Approximately twelve years ago, a detached three-story STEM (Science, Technology, Engineering & Math) component of 62,000 SF was added to the facility on the northeast side of the original four-story wing. The improvement plan for the high school calls for the demolition of the 18,000 SF shop wing, full renovation of the 174,000 SF remaining of the original school, and construction of additions on the northwest and southwest sides of the gymnasium/auditorium section totaling 55,000 SF. There are no floodplains within the limits of the project.

3.2.2 Site Area and Site Area Disturbance

The project site is approximately 7.56 acres in size. It is anticipated that 6.04 acres of area will have soil disturbance due to construction activities.

3.2.3 Runoff coefficients

The estimated average runoff coefficient curve number (CN) of the site after construction is completed is 82.

3.2.4 Receiving Water(s)

The existing conditions at the site consist of the school building and associated parking and driveway areas draining via catch basins to two separate outfalls (design points). See Plans.

3.2.5 Other Permits

Planning and Zoning approval was also required for the project.

3.3.6 Wetlands

Wetlands are located to the south of the track. No wetlands are being impacted as part of the project.

Section 4.0 Construction Sequencing

The sequence of major construction activities will generally occur as follows:

- Installation of Perimeter Erosion/Siltation Control Measures, Anti-Tracking Pad, And Fence Off Areas Limited to Heavy Equipment
- Demolish/Remove Existing Trees, Pavement, and Utilities
- Site Stormwater Runoff from Disturbed Areas to Be Directed Via Temporary Swales Or Diversion Dikes To Sediment Basins As Necessary. Actual Locations to Be Determined in The Field By The Contractor As Construction Dictates.
- Discharges From Dewatering Of Excavation Shall Not Be Diverted Directly Into Any Existing Storm Drains Without Pretreatment Via Sediment Basin Or Temporary Sediment Control Pool
- Establish Rough Subgrades for Roadways and Parking
- Construct Site Elements/Utilities
- Installation of Internal Erosion Controls as Areas Onsite Are Stabilized And Construction Progresses
- Maintain Anti-Tracking Pad And Inspect Erosion Control Measures.
- Construct Final Pavement Courses
- Topsoil And Final Seeding Of All Disturbed Areas And Other Areas Within Site As Directed By Owner's Representative
- Installation Of Lighting And Landscaping
- Inspect And Clean Drainage System

- Removal Of Perimeter Erosion Control Measures
- Final Clean-Up

The actual sequence of work may be altered based upon field conditions encountered and this SWPCP will be updated if and as necessary.

Section 5.0 Best Management Practices (BMPs) for Stormwater Control Measures

Per the General Permit, this SWPCP must address interim and permanent stabilization practices to address pollution caused by soil erosion and sedimentation during construction, and soil erosion and sedimentation following construction. The project's erosion and sedimentation controls and stormwater management systems have been designed to address both short-term and long-term stormwater quality.

The project's Erosion and Sediment Control Plans include many of the measures indicated below. However, the measures specified on the plans are the minimum requirements for erosion and sediment control at the project and are shown in general size and location only. All contractors performing site work on the project, and other contractor entities who may have authority over erosion and sedimentation control measures at the project are responsible for ensuring that all measures are configured and constructed in a manner that will minimize erosion of soils and prevent the transport of sediments and other pollutants to any resource areas. In general terms, all entities performing work on the site have a responsibility to minimize the area of exposed soil, control run-off rate and direction, and provide for rapid stabilization of exposed areas. No additional payment shall be made for changes to the erosion control measures outlined in this document, the specification or the plans, proposed by the contractor or required by the owner to ensure proper protection of on-site and off-site facilities.

5.1 Erosion and Sediment Controls

During construction, stormwater run-off is a concern due to the excess amount of exposed areas that do not have vegetation or other cover to prevent the removal and transportation of sediment to resource areas. The primary function of erosion and sedimentation controls, as defined by the 2002 "Connecticut Guidelines for Soil Erosion and Sediment Control" (hereinafter the "2002 Guidelines") is to, "absorb erosional energies and reduce run-off velocities that force the detachment and transport of soil and/or encourage the deposition of eroded soil particles before they reach any sensitive area". The project addresses the short-term concerns by providing erosion control measures in the form of Erosion and Sediment Control Plans (refer to Attachment 4). The proposed erosion and sedimentation controls consider the specific characteristics of the site and the anticipated construction activities and have been designed in accordance with the 2002 Guidelines.

5.1.1 Soil Stabilization and Protection

Reference: Section 5-11 of the 2002 Guidelines

Prior to any construction activity, hay bales, silt fence, or combination hay bale/silt fence barriers will be placed at the limit of work where run-off potential exists, at other key locations within the site where run-off potential exists, and around stockpiles or stockpile areas. These barriers will be inspected once every seven calendar days and within 24 hours after every rainfall generating a discharge. Repair or replace damage or displaced fencing as required. Collected silt will be removed when one-half the barrier height is reached.

Hay/Straw Bales: *Reference Section 5-11-30 of the 2002 Guidelines*

Use hay/straw bales for the following

- To intercept and detain small amounts of sediment from small disturbed areas.
- To decrease the velocity of sheet flows.
- To redirect small volumes of water away from erodible soils.
- To settle and assist in filtering waters discharged from pumping operations.

Applicability:

- Below small disturbed areas where the drainage area (disturbed and undisturbed) is less than 1 acre in size.
- Above disturbed slopes to direct surface water away from erodible areas where the drainage area (disturbed and undisturbed) is less than 1 acre in size.
- Where protection and effectiveness is required for less than 3 months.
- Where sedimentation will reduce the capacity of storm drainage systems or adversely affect adjacent areas, watercourses and other sensitive areas.
- Not for use in drainage-ways, except in special cases where it is applied with other measures.
- Not intended for use in streams

Silt Fence: *Reference Section 5-11-35 of the Guidelines*

Use silt fence for the following:

- To intercept and retain sediment from disturbed areas
- To decrease the velocity of sheet flows and low volume concentrated flows

Applicability:

- Below small disturbed areas where the contributing drainage area (disturbed and undisturbed) is less than 1 acre in size
- At storm water drainage inlets and catch basins where sedimentation will reduce the capacity of storm drainage systems or adversely affect adjacent areas, water courses and other sensitive areas.
- Not for use in areas where rock, frozen ground or other hard surface prevents proper installation of the barrier.
- Prohibited from use in drainage-ways whose flow is supported by ground water discharge.

5.1.2 Temporary Seeding

Reference: Section 5-3-2 of the 2002 Guidelines

Areas that will remain disturbed but inactive for at least thirty (30) days will receive temporary seeding or soil protection within seven (7) days in accordance with the 2002 Guidelines. Areas that will remain disturbed beyond the seeding season as identified in the 2002 Guidelines, will receive long-term, non-vegetative stabilization and protection (see below) sufficient to protect the site through the winter. In all cases, stabilization and protection measures shall be implemented as soon as possible in accordance with the 2002 Guidelines or as approved by the CT-DEEP.

It is important to note that temporary seeding will not provide the same level of protection that permanent vegetation will provide. Temporary seeding mixtures do not develop a "turf" or "sod". Temporary seeding does not generally receive the same level of maintenance as permanent seeding.

Temporary seeding will be conducted per the table below:

Temporary Erosion Control Seeding

Species (Note 1)	Application Rate, Pounds per Acre	Application Rate, Pounds per 1,000SF	Optimum Seed Depth, Inches (Note 2)	Optimum Seeding Dates (Note 3)
Annual ryegrass (Lolium multiflorum)	40	1.0	0.5	3/1 – 6/15 and 8/1-10/15
Perenial ryegrass (Lolium perenne)	40	1.0	0.5	3/15 - 7/1 and 8/1 – 10/15
Winter Rye (Secale cereal)	120	3.0	1.0	4/8 – 7/1 and 8/1 – 10/15
Oats (Avena sative)	86	2.0	1.0	3/1 – 6/15 and 8/15 – 9/15
Winter Wheat (Triticum aestivum)	120	3.0	1.0	4/15 – 7/1 and 8/15 – 10/15
Millet (Echinochloa crusgalli)	20	0.5	1.0	5/15 – 7/15
Sudangrass (Sorghum Sudanese)	30	0.7	1.0	5/15 – 8/1
Buckwheat (Fapopyrum esculentum)	15	0.4	1.0	4/1 – 9/15
Weeping Lovegrass (Eragostis curbula)	5	0.2	0.25	6/1 – 7/1
ConnDOT All Purpose Mix	150	3.4	0.5	3/1 – 6/15 and 8/1 – 10/15

Note:

1. Listed species may be used in combinations to obtain a broader time spectrum. If used in combinations, reduce each species planting rate by 20% of that listed.
2. Seed at twice the indicated depth for sandy soil
3. May be planted throughout summer if soil moisture is adequate or can be irrigated. Fall seeding may be extended 15 days in the coastal cities.

5.1.3 Soil Stabilization – Short Term Non-Living Soil Protection, Temporary Slope Protection

Reference: Section 5-4-3 of the 2002 Guidelines

Structural (non-living) soil stabilization is intended to protect the soil surface on a temporary basis without the intention of promoting plant growth.

Applicability:

• When grading of the disturbed area will be suspended for a period of thirty (30) days or more consecutive days, but less than five (5) months, disturbed areas will be stabilized within seven (7) days of the suspension of grading through the use of mulch, non-bituminous tackifiers, erosion control netting, or other approved materials appropriate for use as a temporary soil protector.

• For surfaces that are not to be reworked within 5 months but will be reworked within one (1) year, use temporary seeding, seeding-type mulch (hay, straw, or cellulose fiber) or when slopes are less than 3:1, wood chips, bark ships or shredded bark.

Mulch Types:

Hay - The dried stems and leafy parts of plants cut and harvested, such as alfalfa, clovers, other forage legumes and the finer stemmed, leafy grasses. The average stem length should not be less than 4 inches. Hay that can be windblown should be anchored to hold it in place.

Straw - Cut and dried stems of herbaceous plants, such as wheat, barley, cereal *rye,* or brome. The average stem length should not be less than 4 inches. Straw that can be windblown should be anchored to hold it in place.

Wood Chips - Chipped wood material from logs, stumps, brush or trimmings including bark, stems and leaves having a general maximum size of 0.5 inch by 2 inches and free of excessively fine or long stringy particles as well as stones, soil and other debris. No anchoring is required. If seeding is performed where wood chips have been previously applied, prior to the seeding the wood chips should be removed or tilled into the ground and additional nitrogen applied. Nitrogen application rate is determined by soil test at time of seeding (anticipate 12 lbs. nitrogen per ton of wood chips).

Bark Chips, Shredded Bark - Tree bark shredded as a by-product of timber processing having a general maximum size of 4 inches and free of excessively fine or long stringy particles as well as stone and other debris. Material use is the same as wood chips.

Other Mulch Materials - Other mulch materials may include corn stalks, leaves and other similar materials provided they meet the requirements of the materials in Section 5-4 of the 2002 Guidelines.

5.1.4 Soil Stabilization – Temporary Erosion Control Blankets

Reference: Section 5-4-10 of the 2002 Guidelines

Erosion control blankets are a manufactured product composed of biodegradable/photodegradable natural or polymer fibers and/or filaments that have been mechanically, structurally, or chemically bound together to form a continuous matrix. Their purpose is to provide temporary surface protection to newly seeded and/or disturbed soils to absorb raindrop impact and to reduce sheet and soil erosion and to enhance the establishment of vegetation.

Applicability-

- On disturbed soils where slopes are 2:1 or flatter.
- Where wind and traffic generated air flow may dislodge standard, unarmored mulches.

The success of temporary erosion control blankets is dependent upon strict adherence to the manufacturer's installation recommendations. As such, a final inspection should be planned to ensure that the lap joints are secure, all edges arc properly anchored and all staking/stapling patterns follow the manufacturer's recommendations.

Inspect temporary erosion control blankets at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.1 inch or greater for failures. Blanket failure has occurred when (1) soils and/or seed have washed away from beneath the blanket and the soil surface can be expected to continue to erode at an accelerated rate, and/or (2) the blanket has become dislodged from the soil surface or is torn.

If washouts or breakouts occur, re-install the blanket after re-grading and re-seeding, ensuring that blanket installation still meets design specifications. When repetitive failures occur at the same location, review conditions and limitations for use and determine if diversions, stone check dams or other measures are needed to reduce failure rate. Repair any dislodged or failed blankets immediately.

5.1.5 Temporary Filter Inserts

Temporary Filter Inserts are commercially-available geotextile-fabric filters that are configured to fit into the openings of drainage structures. These filters serve as secondary protective measures to trap (filter) sediment that may bypass other control measures and be carried to drainage structure inlets by stormwater run-off during construction. Temporary Filter Inserts will be installed in catch basins and similar drainage structures as secondary protective measures throughout construction. Temporary Filter Inserts will be placed in each existing catch basin and yard drains prior to the start of construction, and in each new catch basin or yard drain during construction. These devices will be removed upon final site stabilization.

Filter inserts will be inspected once every seven (7) calendar days and within 24 hours after every rainfall of 0.1 inches or greater. Replacement of the inserts will be as often as necessary to maintain function of the drainage structure and prevent excessive ponding due to clogged fabric. Ripped or otherwise damaged inserts will be replaced immediately.

5.1.6 Stockpile Management

Reference: Section 4-9 of the 2002 Guidelines

Stockpile management of topsoil and other types of erodible soils is necessary to prevent unnecessary damage resulting from erosion of stockpile material. Locate stockpiles so that natural drainage is not obstructed. Attempt to maximize the distance of stockpiles from wetlands, watercourses, drainage ways, and steep slopes. When the stockpile is down gradient from a long slope, divert run-off water away from or around the stockpile. Install a geotextile silt fence or hay bale barrier around the stockpile area approximately I0 feet from the proposed toe of the slope.

The side slopes of stockpiled material that is erodible should be no steeper than 2: 1. Stockpiles that are not to be used within 30 days need to be seeded and mulched immediately after formation of the stockpile. The seed mix used depends upon the stockpiled material and the length of time it is to remain stockpiled. Information gathered from soil borings and soil delineation can be used to plan the type of seed and any soil amendments that are appropriate for the stockpile. After the stockpile has been removed, the site should be graded and permanently stabilized.

Topsoil stockpiles which will be idle for at least 30 days will be stabilized with temporary seed and mulch no later than 7 days from the last use. Small stockpiles may be covered with impervious tarps or erosion control matting in lieu of seeding and mulching.

5.2 Dewatering

Reference: Section 5-13 of the 2002 Guidelines

Dewatering may be utilized at the site to lower the groundwater table to allow for the construction of subsurface improvements (utilities, foundations, etc.) within a relatively dry environment. Several dewatering techniques may be utilized at the contractor's discretion based on the specific nature of the work. These may include:

- Sumps
- Wells
- Well points

Dewatering wastewaters shall be managed in accordance with the 2002 Guidelines. Where feasible and appropriate, dewatering wastewaters will be infiltrated into the ground. Dewatering wastewaters discharged to surface waters will be discharged in a manner that

minimizes the discoloration of the receiving waters. No discharge of dewatering wastewater(s) shall contain or cause visible oil sheen, floating solids, or foaming in the receiving water. Unless otherwise specifically approved in writing by DEEP, or if otherwise authorized by another state or federal permit, dewatering measures shall be installed on upland soils.

The following measures will be employed to ensure that dewatering wastewaters will not cause scouring or erosion or contain suspended solids in amounts that could reasonably be expected to cause pollution:

- Divert surface waters away from areas needing dewatering.
- Consider if well points and sumps can be used to lower the groundwater table, reducing the need for settling facilities.
- For sites that don't require continuous pumping, pump work areas before construction activities begin each work day.
- Provide filtration near the suction intake.
- Locate pumps, intake sumps, and other intake structures in areas which will not require constant moving, when possible.
- Locate pump discharge facilities (portable, permanent, or bio-filtering structures) such that a minimum disturbance of existing wetlands and watercourses is incurred.
- Provide protection at outlets from pumping operations to dissipate pumping surges and prevent erosion at the point of discharge.

5.2.1 Dewatering Plan

This SWPCP provides general measures for the management of dewatering wastewater based on the measures indicated in the 2002 Guidelines. It is recognized that the use of these measures is dependent upon specific site conditions, the contractor's specific method of operations, and the contractor's dewatering equipment. As this plan provides a general description of dewatering operations, the contractor will be required to submit a project-specific Dewatering Plan. This Dewatering Plan will be submitted to the engineer for review and approval prior to its implementation. The project-specific Dewatering Plan will, at a minimum, identify the following:

1. Locations and associated construction where dewatering is required.
2. Specific methods and devices proposed for dewatering.
3. Details on protection at the inlet and outlet of pumps, method for floating the pump intake, or other methods to minimize and retain the sediment.
4. Proposed location of dewatering discharge and details of infiltration basins or other discharge location. Per the General Permit, where feasible and appropriate, dewatering wastewaters will be infiltrated into the ground.
5. Details on any containment berm construction when dewatering earth materials.
6. Identification of a contingency plan for emergency operations should the dewatering operation prove inadequate to meet the dewatering need or is found to be causing

unacceptable turbidity problems (e.g., alternative discharge locations or use of a portable sediment tank). If turbidity or siltation problems are not adequately controlled by the contingency plan, then the operation will be ceased, and a revised dewatering plan submitted for approval prior to further implementation.

5.3 Emergency Flood Procedures

The site is not located within a FEMA mapped floodplain.

5.3.1 Weather Monitoring

During the construction, monitoring of weather conditions will be conducted by the contractor using locally-available sources. These sources should be consulted daily to ascertain the latest weather forecast. Examples of sources of weather information are summarized below. This list should not be considered all-inclusive.

- National Oceanic and Atmospheric Administration, National Weather Service
  Radio: NWR requires a special radio receiver or scanner capable of picking up the signal. Broadcasts are found in the VHF public service band at these seven frequencies (MHz):
  162.4000, 162.425, 162.450, 162.475, 162.500, 162.525, 162.550
  Television: None
  Web Site: http://weather.gov/
- WTNH
  Radio: None
  Television: Channel 8 (may vary based on local cable provider)
  Web Site: www.wtnh.com
- WCBS Connecticut
  Radio: WTIC AM 1080
  Television: None
  Website: http://connecticut.cbslocal.com/
- WFSB Eyewitness News
  Radio: None
  Television: Channel 3 (may vary based on local cable provider)
  Website: www.wfsb.com
- Fox Connecticut
  Radio: None
  Television: Channel 9 (may vary based on local cable provider)
  Website: http://www.ctn.ow.com/
- NBC Connecticut
  Radio: None
  Television: Channel 4 (may vary based on local cable provider)

5.3.2 Weather Conditions

The National Weather Service uses "Watches" and "Warnings" to provide alerts to potentially dangerous weather.

Weather Watches - A "Watch" means conditions are right for dangerous weather. If a "Watch" is issued, all parties should be alert to evolving weather conditions and be prepared to act.

- For events that come and go quickly, such as severe thunderstorms, tornadoes or flash floods, a watch means that the odds are good for the dangerous weather, but it's not yet happening.
- For longer-lived events, such as hurricanes or winter storms, a watch means that the storm isn't an immediate threat, but is anticipated.

When a severe thunderstorm, tornado, or flash flood watch is in effect, all parties should monitor available weather sources and "watch the sky" for signs of dangerous weather. Severe thunderstorms, tornados, and flash floods often can happen so quickly that warnings cannot be issued in time. Ifthese types of watches are issued, project team notifications should be sent out, construction operations immediately suspended, and flood protection measures implemented.

Hurricane or winter storm watches are longer term. Ifthese types of watches are issued, project team notifications should be made, plans should be made to suspend construction operations based on the timing of the weather event, and applicable flood protection measures implemented.

Weather Warnings - A ''Warning" means that the dangerous weather is threatening the area. If a "Warning" is issued, all parties should immediately take action to (1) ensure personnel safety, and (2) take immediate and appropriate actions in response to the weather event. For severe thunderstorms, tornadoes and flash floods, a "Warning" means the event is occurring**.**

Before "Watches" and "Warnings" are issued, the National Weather Service, private forecasters, newspapers, radio and television normally try to alert the public to potential weather dangers. Often, forecasters begin issuing bulletins on hurricanes and winter storms three or four days before the storm is predicted to occur. It should be noted that forecasters cannot issue alerts for the danger of severe thunderstorms, tornadoes, and flash floods with significant advance notice.

5.3.3 Contingency Phases

The contractor, in concert with the Permittee and engineer will determine which project team members are responsible for each function during each phase. As tasking is assigned, additional responsibilities, teams, and task lists will be created by the contractor to address specific functions during a specific phase.

Preparation Phase

- In response to a potential flood or associated severe weather event, review all erosion and sedimentation control measures, and determine if existing measures require reinforcement and/or if additional temporary measures are required.
- In response to a potential flood or associated severe weather event, structures, materials, and equipment will be reviewed for their potential to cause pollution.
- In response to a potential flood or associated severe weather event, take appropriate actions to ensure that all structures, materials, and equipment will be anchored or restrained to prevent displacement or flotation.
- Provide notifications to Permittee, owner, engineer, and other project participants at the outset and completion of this phase.

Response Phase

- To establish an immediate and controlled presence at the project site. The contractor maintains primary responsibility for response actions.
- To conduct a preliminary assessment of flood incident impact, extent of damage, and disruption to construction operations.
- To evaluate and communicate information regarding other responses, clean-up, and when construction operations can resume.
- To provide contractor personnel, owner, engineer, and other applicable project participants with the facts necessary to make informed decisions regarding subsequent resumption and recovery activity.
- Provide notifications to Permittee, owner, engineer, and other project participants at the outset and completion of this phase.

Resumption Phase

- To establish and organize contractor forces for the resumption of construction operations.
- To mobilize and activate contractor support teams necessary to facilitate and support the resumption process.
- To notify and appraise owner and engineer of the situation.

Recovery/Restoration Phase

- To prepare and implement recovery operations.
- Re-establish erosion and sedimentation controls.
- Re-establishment site controls (fencing, etc.).
- Re-mobilize personnel.
- Re-mobilize materials and equipment

- Perform construction operations required to restore project conditions and continue with construction activities.
- Provide notifications in accordance with Section 2.1 at the outset and completion of this phase.

5.3.4 Contingency Operations

Erosion and Sedimentation Controls

Erosion and sedimentation controls will be present at the project site until final stabilization is achieved.

Procedure -If heavy rains are forecast or in the event of a Weather Watch, Weather Warning, or flood warning, all sedimentation and erosion control measures will be inspected. Based on the inspection coupled with the nature of the forecasted weather event, existing measures will be reinforced and/or additional temporary erosion and sedimentation control measures will be deployed to control erosion and sediment transport.

Structures

Additional structures at the project site will consist of temporary-type structures such as field trailers, portable storage units, and portable toilets. No permanent structures besides the existing school buildings (e.g. buildings or similar construction) are proposed to be located at the project site.

Procedure - In the event of a flood warning, field trailers, portable storage units, and portable toilets may be removed from project site.

Materials

Various materials will be stored at the project site and utilized during the project. These materials are generally categorized into four categories:

- Natural Materials such as earth fill, gravel, topsoil, trees/shrubs, straw mulch, wood chip mulch.
- Non-Polluting Construction Materials such as silt fencing, plastic or metal temporary construction fencing, lumber, trench boxes, concrete or plastic drainage materials.
- Potentially-Polluting Materials such as fuels, lubricants, cleaning solvents, hydraulic oil, antifreeze/coolant, and fertilizers. These materials pose the greatest threat of causing pollution during a flood event, primarily because they will dissolve and/or disperse quickly in flood waters. During the construction project, only minimal amounts of these types of materials will be stored within the flood zone, all materials will be stored in a neat, orderly manner in appropriate sealed containers with proper labeling.
- Floatable Materials such as lumber, sealed containers, portable storage units, portable

toilets, trash and trash containers, and other buoyant items.

Procedure – In the event of a flood warning, the following procedures will be implemented:

- Natural Materials - Stockpiles of earth materials can remain in-place and should be protected against erosion in accordance with the "2002 Connecticut Guidelines for Soil Erosion and Sediment Control". If possible natural materials such as shrubs or smaller plantings will be removed from the project site. Larger plantings such a tress should be secured together with rope.
- Non-Polluting Construction Materials - If possible, Non-Polluting Construction Materials will be removed from the project site. If these materials cannot be relocated or removed, they should be consolidated to the extent possible and reviewed item-by-item for materials which have the potential to float. If a material is identified that may float, comply with the procedure for Floatable Materials.
- Potentially-Polluting Materials - All Potentially-Polluting Materials will be removed from the project site.
- Floatable Materials - All Floatable Materials will be removed from the project site. If larger stockpiles of items such as wood chip mulch cannot be relocated, the stockpile will be completely covered with plastic sheeting and secured with sandbags.

Equipment

Equipment at the project site will consist of heavy equipment (excavators, dozers, loaders, trucks, etc.) and small equipment (pumps, generators, plate compactors, etc.). In the event of a flood, the primary concern with this equipment is the potential release of fuels, hydraulics oils, and lubricants associated with the various mechanical components.

Procedure - In the event of a flood warning, equipment will be; (1) removed from the project site; or (2) staged in an appropriate location and secured.

5.4 Post-Construction Stormwater Management

The objective of the stormwater management system designed for the proposed development is to;

1) Capture and convey water away from buildings and off hardscape, and parking lots
2) Use engineered facilities to capture and infiltrate stormwater to the extent possible, with at least the stormwater quality volume infiltrated onsite (e.g. infiltration chambers, bioretention basins)
3) Address the removal of at least 80% of the Total Suspended Solids (TSS) by the introduction of combination of proprietary hydrodynamic separator and infiltrator chambers.
4) Effectively manage stormwater run-off to control peak flows and volumes

Drainage Characteristics – Existing Conditions

The existing conditions at the site consist of the school building and associated parking and driveway areas draining via catch basins to two separate outfalls (design points). Design point 1 is located at a manhole on-site located just north of the synthetic turf fields to the southeast of the STEM building. Design point 2 is a catch basin to the west of the track.

Drainage Characteristics – Proposed Conditions

Under proposed conditions, the project site will continue to drain to the same design points. A stormwater management system is proposed which will involves pipes, swales and catch basins, hydrodynamic separators, one subsurface retention system and two bioretention areas. The underground retention systems which are anticipated to be comprised of plastic chambers surrounded by stone.

Hydrodynamic separators (installed near the inlet of the subsurface retention system and inlet to the southern bioretention area) are being proposed to improve the water quality before the storm runoff goes into the subsurface retention system and the southern bioretention area.

As required, the first one inch of precipitation over the site impervious areas must be retained on-site to recharge the water table (Water Quality Volume). The water quality volume proposed to be infiltrated at the site is 22,349 cubic feet (required volume is 21,127cubic feet). This volume will be retained on-site in the subsurface retention system and bioretention areas and exfiltrated into the ground.

In addition to the treatment provided by subsurface retention systems and the bioretention area, two hydrodynamic separators are being proposed at the site. These will be located just prior to storm water runoff entering the subsurface retention system and the southern bioretention basin. The units will be sized to treat the required water quality flow and have been designed to remove 80% of the total suspended solids (TSS), along with miscellaneous debris that may be present in the runoff.

The methodology used for these calculations was based on the State of Connecticut DEP's Stormwater Quality Manual.

Peak Flows, run-off volumes and water quality volumes are shown in the following tables:

Summary Table 1: Peak Flows

Area	Peak Flow (cubic feet per second)			
	2-Year	10-Year	25-year	100-Year
Existing Conditions (DP1)	30.65	48.29	59.48	76.87
Proposed Conditions (DP1)	27.46	42.5	52.91	70.71
Existing Conditions (DP2)	9.62	17.93	23.37	32.28
Proposed Conditions (DP2)	6.3	14.91	19.64	32.27
Percent Reduction	16%	13%	12%	6%

Summary Table 3: Hydraulic Volume

Area	Volume (ac-ft)			
	2-Year	10-Year	25-year	100-Year
Existing Conditions (DP1)	1.756	2.834	3.524	4.602
Proposed Conditions (DP1)	1.484	2.529	3.281	4.482
Existing Conditions (DP2)	0.703	1.316	1.732	2.405
Proposed Conditions (DP2)	0.452	1.082	1.524	2.252
Percent Reduction	21%	13%	9%	4%

Summary Table 5: Water Quality

Area	Water Quality Volume (cubic feet)		Treated Water Quality Flow (cfs)	
	Required	Proposed*	Required	Proposed
UG 1	21,127	13,286	5.91	3.70 (HS72)**
Bioretention 1		1,138		0.15
Bioretention 2		7,925		3.70 (HS72)**
Total	**21,127**	**22,349**	**5.91**	**7.55**

***** Storage volume below weir elevations
** Hydrodynamic Separator Model for treatment (by Vortsentry or App. Equal)

5.4.1 Permanent Stabilization Practices

Permanent site stabilization practices are included on the drawings in Attachment 4 and include the following:

- Grass - Portions of the site such as landscape areas, islands, borders, and

miscellaneous areas will be seeded as turf areas. Turf will provide a stabilized surface, but will allow for direct infiltration of stormwater.

- Landscaping/Planted Areas - Several areas of the site will be landscaped and planted. Landscaping, which includes a variety of plantings in mulched beds, is predominantly included in areas proximal to the building. Both landscaped and planted areas will provide a stabilized surface, as well as allow for direct infiltration of stormwater.
- Hardscape - Hardscape on the site will include bituminous pavement drives and parking, concrete walkways, concrete stairs and pavers. Stormwater from these areas will either 1) run-off to an adjacent pervious surface (e.g. grass or landscaping), or 2) run-off to a collection point such as catch basin or drain, and be conveyed to the site stormwater system. Once in the system, stormwater will flow to the detention basin.

5.4.2 Maintenance of Permanent Stabilization

After construction is completed and accepted by the Owner, inspection and maintenance of stabilized surfaces will be the responsibility of the Owner.

- Grass, Landscape, and Planted Areas: Inspect semi-annually for erosion or dying vegetation. Repair and stabilize any bare or eroded areas and replace vegetation as soon as possible.
- Access Drives and Site Cleanup: Inspect on a regular basis not to exceed weekly for litter and debris. Sweep at least twice a year, with the first occurring as soon as possible after snowmelt and the second not less than 90 days following the first.
- Catch Basin Sumps: Inspect semi-annually and cleaned when the sump is one half full of silt and/or debris.

Section 6.0 Other Controls

6.1 Waste Disposal

Litter, debris, building materials or other domestic and construction waste will be placed in appropriate containers that prevent release and properly disposed of off-site or segregated and properly reused. Portable toilets containing sanitary wastes will be secured to prevent them from being tipped over. Routine inspections and good housekeeping measures will minimize the potential of a release of waste to surface water.

6.2 Washout Areas

A designated "Washout Area" will be established for washing the following:

- Latex paint equipment
- Vehicles, containers, and equipment for concrete

Applicators and containers for materials which have not contained any oils, greases, oil-based paints, solvents, fuels, lubricants, etc.

The Washout Area shall be established as follows:

(1) Outside of any buffers and at least 50 feet from any steam, wetland or other sensitive resource; or
(2) In an entirely self-contained washout system.

The Washout Area shall be clearly delineated with fencing, flagging, or similar highly- visible materials. Washout activities are only permitted within the Washout Area. All wash water shall be directed into a container or pit designed such that no overflows can occur during rainfall or after snowmelt. There shall be no surface discharge of washout wastewaters from the Washout Area.

Hardened concrete waste from the Washout Area will be removed and disposed-of consistent with practices developed for the "Waste Materials" above. At least once per week, any containers or pits used for washout will be inspected to ensure structural integrity, adequate holding capacity, and to check for leaks or overflows. Ifthere are signs of leaks, holes or overflows in the containers or pits that could lead to a discharge, the containers will be repaired prior to further use. For concrete washout areas, all hardened concrete waste will be removed whenever the hardened concrete has accumulated to a height of one-half (Y,) of the container or pit or as necessary to avoid overflows. A record of maintenance and inspections for the Washout Area is included in Appendix A.

6.3 Off-Site Vehicle Tracking

Stabilized construction entrances (anti-tracking pad) will be used to help reduce the movement of sediments from the site to off-site areas by vehicles. Construction details for these facilities are contained on the project's Erosion and Sedimentation Control Plans. A stabilized construction entrance will be installed at each primary site access point used by construction equipment.

Stabilized construction entrances will be maintained in a condition which will prevent tracking and washing of sediment onto paved surfaces. Each entrance will be periodically top-dressed with additional stone and/or additional length added as conditions demand.

All sediment spilled, dropped, washed or tracked onto paved surfaces will be immediately removed. Roads adjacent to the site will be left clean at the end of each day. It is also recognized that the use of stabilized construction entrances may not eliminate the need for periodic street sweeping. Therefore, adjacent paved roadways will be swept as necessary.

If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then either;

(1) the construction entrance will be lengthened;
(2) the construction access road surface will be modified, or;
(3) washing racks (or similar devices) will be installed before the vehicle enters a paved surface. If a washing rack or similar device is to be used to wash sediment from tires, provisions will be employed to intercept the wash water and trap the sediment before it is carried off-site. Per the 2002 Guidelines, the sediment trapping facility will be sized to hold the maximum volume of water that would be used over a 2- hour period.

6.4 Dust Control

The generation of fugitive dust will be minimized during all aspects of the work, and measures to suppress fugitive dust will be employed when work activities are conducted which could generate dust. Construction sequencing will be organized and conducted to the extent possible to leave existing pavement or ground coverings in place until just prior to earth excavation for the purpose of minimizing the migration of dust beyond the project limits into the surrounding area. If the amount of fugitive dust and/or particulate generated during the work is deemed unacceptable or exceeds baseline project site conditions the work will be halted and corrective measures implemented. Dust control and suppression will be implemented as follows:

6.4.1 Water

Water will be applied only at the locations, at such times, and in the amount required to control and suppress dust. The volume of water sprayed for controlling dust shall be minimized so as to prevent the runoff of water. No discharge of dust control water shall contain or cause a visible oil sheen, floating solids, visible discoloration, or foaming in the receiving stream.

6.4.2 Calcium Chloride

Calcium chloride will be applied only at the locations, times, and in the amount approved by the owner (as Permittee). The application of calcium chloride will be by means of a mechanical spreader, or other approved methods.

6.4.3 Mulch

The use of mulch for dust control will be coordinated with erosion and sedimentation control measures. Straw mulch will be applied at a rate of 100 pounds per 1,000 square feet (100 lb./1,000 ft2). Wood chips or wood mulch will be applied at such a rate as to form a layer one (1) inch thick.

6.5 Spill Prevention

6.5.1 Potential Stormwater Pollution Sources

During construction, the following are potential sources of pollutants that could impact stormwater:

- Cleared and disturbed grassed/planted areas;
- Pavement and utility removal;
- Construction site entrances and bituminous access drive lot construction;
- Foundation excavation and building construction.
- Topsoil and mulch installation;
- Dewatering operations;
- Final grading and landscaping

6.5.2 Potential Stormwater Pollutants

The materials and substances in the following list are potential stormwater pollutants that are likely to be present during construction.

- Concrete
- Detergents
- Paints (enamel and latex)
- Wood Preservatives
- Pesticides
- Plaster
- Fertilizers
- Petroleum Based Products
- Cleaning Solvents
- Asphalt
- Glue, Adhesives
- Curing Compounds
- Hydraulic Oil / Fluids
- Gasoline
- Diesel Fuel
- Kerosene
- Antifreeze / Coolant

6.5.3 Good Housekeeping

The following good housekeeping practices will be followed on-site during the project:

- An effort will be made to store only enough products required to perform the work.
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container

and opening a new container.

- Manufacturers' recommendations for proper use and disposal will be followed.
- The Construction Manager and/or site superintendent will inspect daily to ensure proper use and disposal of materials on-site.
- Dumpsters will be kept covered and drain plugs will remain in place unless being cleaned.
- Products will be kept in original containers unless they are not re-sealable. Leftover product will be properly disposed of or placed in a sealable container.
- Original labels and material safety data will be retained as they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

6.5.4 Product Specific Practices

The following product specific practices will be followed on-site:

- Chemical and Petroleum Product Storage - All chemical and petroleum product containers stored on the site (excluding those contained within vehicles and equipment) will be stored in tightly sealed containers that are clearly labeled. All chemical and petroleum product containers will be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers will be stored under a roofed area except for those chemicals stored in containers of 100 gallon capacity or more, in which case a roof is not required. Double-walled tanks satisfy this requirement.

- Petroleum Products - All on-site construction vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Any asphalt substances used on-site will be applied per the manufacturer's recommendations. Spill kits will be included with any fueling sources and maintenance activities.

- Fertilizers - Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. Fertilizer will not be stored on site.

- Paints - All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system, but will be properly disposed of according to manufacturers' instructions or State and local regulations. Spray guns will be cleaned on a removable tarp.

6.5.5 Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information.

- Materials and equipment necessary for spill cleanup will be kept in the designated material storage areas on-site. Equipment and materials will include, but not limited to, brooms, dustpans, mops, rags, gloves, googles, kitty litter, sand, sawdust, Speedi-Dry and plastic and metal trash containers specifically made for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous materials will be reported to the appropriate State and/or local government agency, regardless of the size. The national Response Center number is (800)424-8802. The CT-DEEP Emergency Reporting number is (800)424-3333
- The site construction superintendent will be responsible for spill prevention and cleanup. The names of responsible construction spill containment and cleanup personnel will be posted in the material storage area and in the office trailer on-site.

6.6 Post-Construction Cleaning

All post-construction stormwater structures will be cleaned of construction sediment and any remaining silt fence shall be removed upon stabilization of the site, prior to filing notice of termination.

Section 7.0 Inspections and Monitoring

Throughout all phases of construction, the erosion control measures will be routinely inspected, cleaned, repaired, and replaced as necessary. Maintenance of erosion and sedimentation control measures is critical to their effectiveness. Maintenance will be an ongoing process during the period of construction and will continue until long-term vegetation is established. Mulching and seeding will be inspected throughout all phases of construction: at the end of each workday, if precipitation is forecast and after each rainfall. At the end of each workweek, prior to weekends, all erosion and sediment control measures will be inspected and repairs/replacements made as required.

Throughout the construction process, extra stocks of hay bales and filter fabric will be kept on-site to replace those that may become damaged and/or deteriorated.

Any erosion and sediment control measures, which upon inspection, are found to be damaged, deteriorated, or not functioning properly, will be repaired, replaced, and corrected immediately after inspection.

Inspection procedures will be addressed and implemented in the following manner:

7.1 Plan Implementation Inspections

Within the first 30 days following commencement of construction activity on the site, a representative of the Permittee will inspect the site. The Permittee's representative for Plan Implementation Inspections is:

Stantec Consulting Services, Inc.
55 Church Street, Suite 601
New Haven, CT 06510

The Permittee's representative will inspect the site at least once and no more than three times during the first 90 days of commencement of the construction activity to confirm compliance with the General Permit and proper initial implementation of all control measures designated in this SWPCP for the site for the initial phase of construction.

7.2 Routine Inspections

The Permittee will routinely inspect the site for compliance with the General Permit and this SWPCP for the site until a Notice of Termination has been submitted. Inspection procedures for these Routine Inspections will be addressed mid implemented in the following manner.

7.2.1 Qualified Inspector

The Permittee will retain a Qualified Inspector meeting the following definition:

"An individual possessing either (1) a professional license or certification by a professional organization recognized by the commissioner related to agronomy, civil engineering, landscape architecture, soil science, and two years of demonstrable and focused experience in erosion and sediment control plan reading, installation, inspection and/or report writing for residential and commercial construction projects in accordance with the Guidelines; or (2) five years of demonstrable and focused experience in erosion and sediment control plan reading, installation, inspection and/or report writing for residential and commercial construction projects in accordance with Guidelines; or (3) certified by the Connecticut Department of Transportation (DOT)".

The Permittee's Qualified Inspector will be an individual (s) from;
TBD

7.2.2 Rainfall Measurement

The Contractor will provide and maintain a rain gauge on-site to document rainfall amounts.

7.2.3 Inspection Criteria

At least once a week and within 24 hours of the end of a storm that generates a discharge, the Qualified Inspector, will inspect, at a minimum, the following:

- Disturbed areas of the construction activity that have not been finally stabilized.
- All erosion and sedimentation control measures.
- All structural control measures.

- Soil stockpile areas.
- Washout Areas
- Locations where vehicles enter or exit the site

For storms that end on a weekend, holiday, or other time after which normal working hours will not commence within 24 hours, an inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For storms of less than 0.5 inches, an inspection will occur immediately upon the start of the subsequent normal working hours. Where sites have been temporarily or finally stabilized, inspections will be conducted at least once every month for three months.

The areas noted above will be inspected for evidence of, or the potential for, pollutants entering the drainage system and impacts to the receiving waters. Locations where vehicles enter or exit the site will also be inspected for evidence of off-site sediment tracking. Where sites have been temporarily or finally stabilized, such inspection will be conducted at least once every month for three months.

The Qualified Inspector will evaluate the effectiveness of erosion and sediment controls, structural controls, stabilization practices, and any other controls implemented to prevent pollution and determine if it is necessary to install, maintain, or repair such controls and/or practices to improve the quality of stormwater discharge(s)

7.2.4 Inspection Report

Following each inspection, the Qualified Inspector will prepare a report that will summarize the following:

- The scope of the inspection.
- Name(s) and qualifications of personnel making the inspection.
- The date(s) of the inspection.
- Weather conditions including precipitation information.
- Major observations relating to erosion and sediment controls and the implementation of the SWPCP.
- A description of the stormwater discharge(s) from the site.
- Any water quality monitoring performed during the inspection.

Report forms are included in Appendix A. The report will be signed by the Permittee or his authorized representative. Reports will be retained as part of the SWPCP.

The report will include a statement that, in the judgment of the Qualified Inspector(s) conducting the Routine Inspection, the site is either in compliance or out of compliance with the terms and conditions of this SWPCP and General Permit. If the site inspection indicates that the site is out of compliance, the inspection report will include a summary of the remedial actions required to bring the site back into compliance. Non-engineered corrective actions (as identified in the 2002

Guidelines) will be implemented on site within 24 hours and incorporated into a revised SWPCP within three (3) calendar days of the date of inspection unless another schedule is specified in the 2002 Guidelines. Engineered corrective actions (as identified in the 2002 Guidelines) shall be implemented on site within seven (7) days and incorporated into a revised SWPCP within ten (10) days of the date of inspection, unless another schedule is specified in the 2002 Guidelines or is approved by DEEP. During the period in which any corrective actions are being developed and have not yet been fully implemented, interim measures will be implemented to minimize the potential for the discharge of pollutants from the entire site.

Inspectors from DEEP may inspect the site for compliance with the General Permit at any time construction activities are ongoing and upon completion of construction activities to verify the final stabilization of the site and/or the installation of post-construction stormwater management measures.

7.2.5 Turbidity Monitoring

The Permittee via the Qualified Inspector, will perform turbidity monitoring in accordance with the following:

Monitoring Frequency

- Sampling will be conducted at least once every month, when there is a discharge of stormwater from the site while construction activity is ongoing, until final stabilization of the drainage area associated with each outfall is achieved.
- The Permittee will collect samples during normal working hours, which for this project are Monday through Friday, between the hours of 7:00AM and 5:00PM.
- If sampling is discontinued due to the end of normal working hours, the Permittee will resume sampling the following morning or the morning of the next working day following a weekend or holiday, as long as the discharge continues.
- Sampling may be temporarily suspended any time conditions exist that may reasonably pose a threat to the safety of the person taking the sample. Such conditions may include high winds, lighting, intense rainfall, or other hazardous condition. Once the unsafe condition is no longer present, sampling will resume.
- If there is no stormwater discharge during a month, sampling will not be conducted.

Sample Collection

- All samples will be collected from discharges resulting from a storm event that occurs at least 24 hours after any previous storm event generating a stormwater discharge.
- Any sample containing snow or ice melt must be identified on the Stormwater Monitoring Report form. Sampling of snow or ice melt in the absence of a storm event is not a valid sample.
- Samples shall be grab samples taken at least three separate times during a storm event and shall be representative of the flow and characteristics of the discharge(s). Samples may be taken manually or by an in-situ turbidity probe or other automatic sampling device equipped to take individual turbidity readings (i.e. not composite). The first sample shall be taken

within the first hour of stormwater discharge from the site. In cases where samples are collected manually and the discharge begins outside of normal working hours, the first sample shall be taken at the start of normal working hours.

Sampling Locations

- Sampling is required at CB# 19 (southwest of school), MH EX 7 (east of school), MH 5 (southeast of school) and an existing catch basin just north of the concession stand building northeast of the track.
- The outfalls authorized by the General Permit are identified on the Grading and Drainage Plan.

Sampling and Analysis

Sampling and turbidity analysis will be conducted in accordance with ASTM D6855. Results will be reported in Nephelometric Turbidity Units (NTU).

Turbidity Values

The stormwater discharge turbidity value for each sampling point will be determined by taking the average of the turbidity values of all samples taken at that sampling point during a given storm.

7.2.6 Stormwater Monitoring Reports

Within thirty (30) days following the end of each month, the Permitee will submit the stormwater sampling result(s) on the Stormwater Monitoring Report (SMR) form included in Appendix B. If there was no discharge during any given monitoring period, the Permitee will submit the form as required with the words "no discharge" entered in place of the monitoring results. If the Permitee monitors any discharge more frequently than required by the General Permit, the results of this monitoring will be included in additional SMRs for the month in which the samples were collected.

The SMR can be submitted to CT DEEP electronically via NetDMR or mailed directly to:

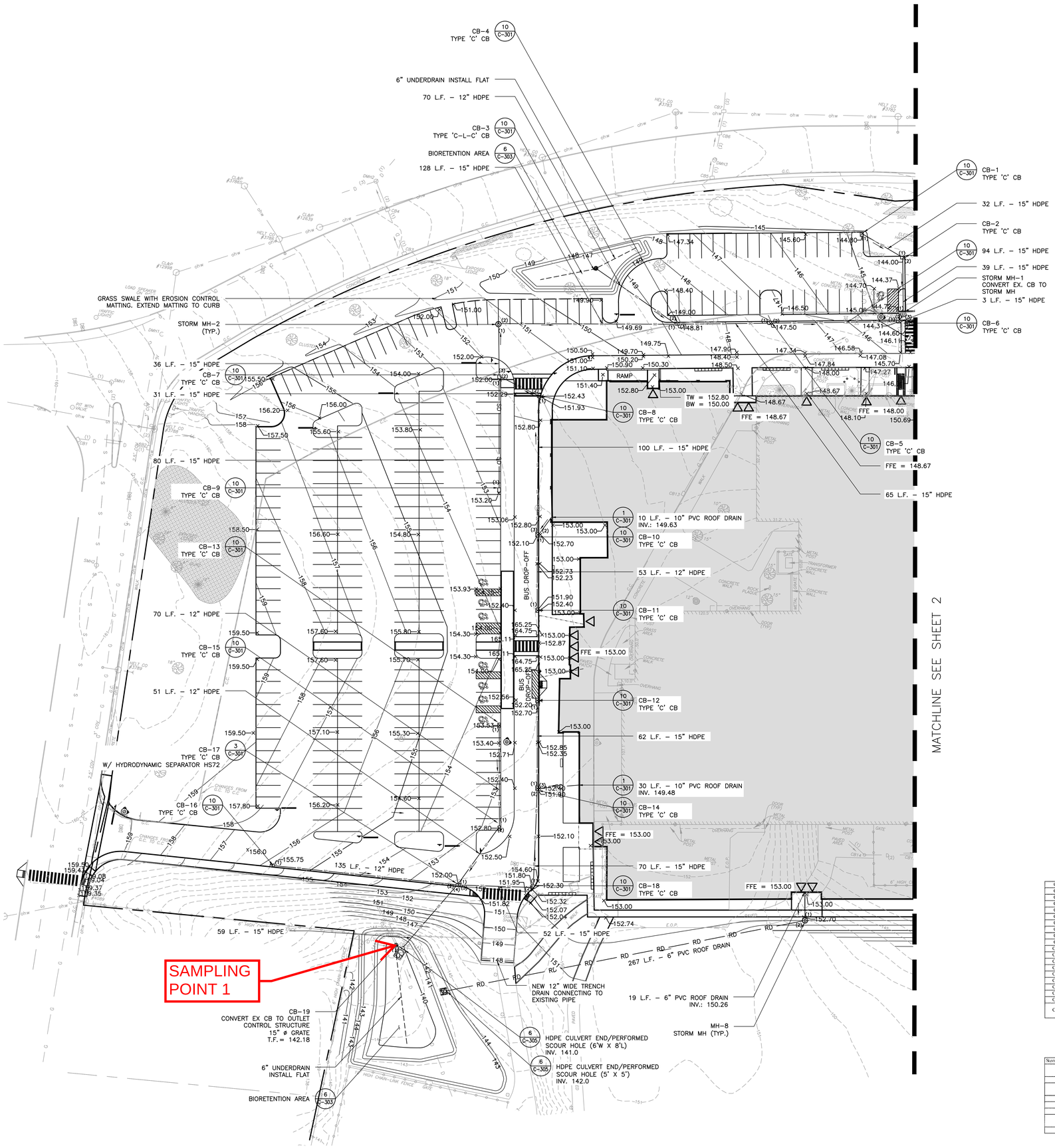
Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division (Attn: DMR Processing)
Connecticut Department of Energy and Environmental Protection
79 Elm Street, Hartford, CT 06106-5127

Note, to submit paper SMRs, an Opt-Out Request must be submitted to CT DEEP. Information on registering for NetDMR or submitting Opt-Out Requests is found in the Permit. A copy of a blank SMR is located in **Appendix C** or at www.ct.gov/deep/stormwater.

Section 8.0 Plan Amendments

The Contractor responsible for the measures at the site will amend the SWPCP if there is a change in contractors or subcontractors at the Site, or a change in design, construction, operation, or maintenance at the Site which has the potential for the discharge of pollutants as a result of stormwater runoff. The New London High School and its consultant shall be notified if amendments to the SWPCP or control measures utilized at the Site fail to prevent stormwater runoff pollution.

The CT DEEP may notify the New London High School at any time that the SWPCP and/or Site does not meet the requirements of the permit, and the New London High School will be required to modify the plan within 7 days to address the concerns of CT DEEP. Within 15 days, the New London High School will submit a written certification that the requested changes



LEGEND

- UNDERGROUND RETENTION SYSTEM
- S — PROPOSED SANITARY SEWER
- SD — PROPOSED STORM SEWER
- UGE — PROPOSED UNDERGROUND ELECTRIC
- FP — PROPOSED FIRE PROTECTION
- GAS — PROPOSED GAS
- UGC — PROPOSED UNDERGROUND CABLE
- W — PROPOSED DOMESTIC WATER
- PROPOSED DOORWAY
- PROPOSED TREE
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD LIGHT
- PROPOSED DUMPSTERS

GENERAL NOTES:

1. ALL UNDERGROUND UTILITY INFORMATION AS SHOWN ON THESE PLANS SHALL BE CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION. THE CONTRACTOR SHALL CALL 1-800-922-4455 "CALL BEFORE YOU DIG" TWO DAYS PRIOR TO BEGINNING ANY EXCAVATION AT THE SITE.

2. PROTECT EXISTING UTILITIES FROM DAMAGE. ACTIVE UTILITY LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL SUBSURFACE UTILITIES PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL USE CARE DURING CONSTRUCTION TO AVOID DAMAGING ANY UTILITIES AND STRUCTURES NOT SCHEDULED FOR REMOVAL . THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: EXISTING ELECTRICAL, CABLE, TELEPHONE, SEWER AND WATER LINES, DRAINAGE STRUCTURES, VALVES, SITE FURNISHINGS, CURBS, PAVEMENT AND PLANTINGS. ANY DAMAGE RESULTING FROM THIS CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER OR TO THE UTILITY OWNER.

4. ABANDONED SURFACE AND SUBSURFACE UTILITIES I.E. WATER, ELECTRIC, TELEPHONE, GAS, STORM SEWER, SANITARY LINES, CONCRETE FOOTINGS AND FOUNDATIONS UNCOVERED DURING CONSTRUCTION SHALL BE REMOVED WHEN NECESSARY AND AS APPROVED BY THE ENGINEER TO PERMIT NEW CONSTRUCTION.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND COORDINATE WITH ALL UTILITY COMPANIES (WATER, SEWER, ELECTRICAL, ETC...) FOR CONNECTIONS AND OR RELOCATIONS TO EXISTING SERVICES.

6. TEST PIT MAY BE REQUIRED TO DETERMINE LOCATIONS OF EXISTING UTILITIES AND PRESENCE OF ANY UTILITIES NOT SHOWN OF SURVEY. CONTACT DESIGN ENGINEER IF UNFORESEEN OBSTRUCTIONS ARE ENCOUNTERED.

7. SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY PRIOR TO THE START OF GRADING AND MAINTAINED UNTIL ALL GROUND SURFACES ARE STABILIZED I.E. WITH TURF, PAVEMENTS, ETC.

8. SEE SITE LOGISTICS PLAN FOR ADDITIONAL INFORMATION REGARDING STAGING/STORAGE AREA AND LIMITS OF CONSTRUCTION FENCING, GATES, ETC.. ALL SITE ITEMS SUCH AS PAVEMENT, CURBS, TREES, UTILITIES, LAWN, ETC. OUTSIDE THE CONTRACT LIMIT LINE FOR THE BASE BID SHALL BE PROTECTED IN PLACE. ANY DAMAMGE TO EXISTING ITEMS NOT SCHEDULED TO BE DEMOLISHED/REMOVED SHALL BE REPAIRED IN KIND BY THE CONTRACTOR AT HIS EXPENSE.

9. ALL EXISTING UTILIITIES (STRUCTURES AND PIPES) WITHIN THE LIMIT OF WORK SHALL BE ABANDONED UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. TOP 2' OF ALL DRAINAGE STRUCTURES SHALL BE REMOVED AND STRUCTURE SHALL BE FILLED WITH CRUSHED STONE. CAP/ABANDON UTILITY CONNECTIONS TO THE MAINS AT THE STREET IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS. UTILITIES CONFLICITNG WITH PROPSOED WORK SHALL BE REMOVED.

10. ALL DRAINAGE PIPES SHALL BE 12" HDPE UNLESS OTHERWISE NOTED.

12. NO SEDIMENT LADEN WATER SHALL BE SENT TO THE UNDERGROUND RETENTION SYSTEM. FLOWS SHALL BYPASS THE SYSTEMS UNTIL ALL AREAS CONTRIBUTING TO THE SYSTEMS ARE STABLIZED.

13. ACCESSIBLE ROUTES' SLOPES SHALL BE 1:20 (5%) OR LESS AND THE CROSS SLOPES SHALL NOT EXCEED 1:50 (2%). CHANGES IN LEVELS SHALL NOT BE GREATER THAN 1/2 INCH, AND SLOPES SHALL NOT BE GREATER THAN 1/20 UNLESS RAMPS OR LIFTS ARE PROVIDED.

14. STORMWATER: PROPOSED WORK SHALL BE IN ACCORDANCE WITH MS4 REQUIREMENTS. SITE WILL BE SUBJECTED TO PERIODIC INSPECTIONS DURING CONSTRUCTION.

15. WATER: ALL NEW OR MODIFIED CONNECTIONS REQUIRE A PERMIT APPLICATION AND POTENTIAL ASSOCIATED CONNECTION FEE. ALL NEW PIPING MUST BE PRESSURE TESTED AND DISINFECTED PER AWWA STANDARDS. BACKFLOW DEVICES SHALL BE INSTALLED AND INSPECTED PRIOR TO SERVICE BEING TURNED ON.

16. SEWER: ALL NEW OR PROPOSED/MODIFIED CONNECTIONS REQUIRE A PERMIT APPLICATION AND POTENTIAL CONNECTION FEE.

17. EROSION & SEDIMENT CONTROL: EROSION & SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED DURING CONSTRUCTION AND POST CONSTRUCTION UNIL THE SITE IS STABILIZED. ALL CATCH BASINS SHALL BE PROTECTED FROM EROSION & SEDIMENT DURING THAT TIME PERIOD.

CB #	Type	Rim	Sump	Invert #1	Invert #2	Invert #3	Invert #4
CB-1	Type 'C' CB	144.80	139.80	141.80	-	-	-
CB-2	Type 'C' CB	144.00	139.00	141.00	141.00	-	-
CB-3	Yard Drain	147.00	144.00	144.00	-	-	-
CB-4	Type 'C' CB	148.81	141.30	146.00	143.30	143.30	-
CB-5	Type 'C' CB	147.50	140.25	142.25	142.25	-	-
CB-6	Type 'C' CB	144.50	139.50	141.00	141.50	-	-
CB-7	Type 'C' CB	152.00	146.25	149.00	148.25	148.25	-
CB-8	Type 'C' CB	151.93	145.54	147.54	147.54	-	-
CB-9	Type 'C' CB	153.20	148.26	150.20	-	-	-
CB-10	Type 'C' CB	152.10	146.50	148.50	148.90	148.5	-
CB-11	Type 'C' CB	151.90	146.90	148.90	-	-	-
CB-12	Type 'C' CB	152.20	147.20	149.20	-	-	-
CB-13	Type 'C' CB	153.53	148.53	150.53	-	-	-
CB-14	Type 'C' CB	151.90	146.58	148.58	148.58	148.85	-
CB-15	Type 'C' CB	152.80	147.80	149.80	149.80	-	-
CB-16	Type 'C' CB	155.75	150.75	152.75	-	-	-
CB-17	Type 'C' CB	152.00	144.63	149.55	149.00	142.36	146.28
CB-18	Type 'C' CB	151.80	145.88	147.88	147.88	-	-
CB-19	Yard Drain	142	136.8	136.8 (Ex. 15" C.P.P.)			

Storm MH #	Rim	Sump	Invert #1	Invert #2	Invert #3	Invert #4	Type
1	144.64	137.9	140.61	141.47	137.9 (Ex. 15" RCP)		Convert existing CB to MH
2	151.77	147.9	147.9	147.9	-	-	New
3	139	126.56	126.56	126.56 (Ex. 15" CPP)	-	-	New Doghouse
4	138.91	125.74	125.74	125.74	-	-	New Doghouse
5	139.46	132.77	137.28	132.77			
6	138.06	132.57	132.57	132.57	-	-	New
7	133.9	124.69	129.39	124.69 (Ex. 15" RCP)	124.69 (Ex. 15" RCP)		New Doghouse
8	152.7	142.45	148.8	142.45	-	-	

GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

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CERTIFICATION:

CONSULTANT:

Stantec

Stantec Consulting Services Inc.
55 Church Street, Suite 601
New Haven, CT
06510
Tel. 203.495.1645
Fax. 203.495.1652
www.stantec.com

REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
GRADING & DRAINAGE PLAN 01

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-106

DATE: 10 JANUARY 2020
JOB NUMBER: 15050

CB-20	Type	Rim	Sump	Invert #1	Invert #2	Invert #3	Invert #4
CB-21	Type 'C-L' CB	135.67	130.67	132.67	132.67	-	-
CB-22	Type 'C' CB	137	132	134	-	-	-
CB-23	Type 'C' CB	137.6	132.6	134.6	-	-	-
CB-24	Type 'C' CB	134.43	129.43	131.43	-	-	-
CB-25	Type 'C' CB	135.5	128.57	131.95	131.95	130.57	-
CB-26	Type 'C' CB	136.9	131.54	133.54	-	-	-
CB-27	Type 'C' CB	136.3	130.05	133.05	133.05	-	-
CB-28	Type 'C' CB	136.2	130.65	132.65	132.65	-	-
CB-29	Type 'C' CB	132.96	127.96	129.96	-	-	-
CB-30	Yard Drain	139.26	135.00	137.00	137.00	-	-

Storm MH #	Rim	Sump	Invert #1	Invert #2	Invert #3	Invert #4	Type
3	139.00	126.56	126.56	126.56 (Ex. 15" CPP)	-	-	New Doghouse
4	138.91	125.74	125.74	125.74	-	-	New Doghouse
5	139.46	132.77	136.43	132.77			New
6	138.00	132.59	132.59	134.21	133.89	-	New
7	133.90	124.69	129.39	124.69 (Ex. 15" RCP)	124.69 (Ex. 15" RCP)	-	New Doghouse
8	152.70	150.00	150.00	150.00	-	-	New
Ex. DMH7	137.06	124.9	124.90 (Ex. 18" CPP)	132.40 (Ex. 12" CPP)	129.92	133.30 Ex. 12" CPP	
Ex. DMH5	141.57	133.5	133.90 (Ex. 12" RCP)	133.90 (Ex. 15" RCP)	-	-	
Ex. DMH11	138.89	127.9	127.90 (Ex. 12" RCP)	127.90 (Ex. 15" RCP)	127.90 (Ex. 15" RCP)	136.60	

LEGEND

- UNDERGROUND RETENTION SYSTEM
- S — PROPOSED SANITARY SEWER
- SD — PROPOSED STORM SEWER
- UGE — PROPOSED UNDERGROUND ELECTRIC
- FP — PROPOSED FIRE PROTECTION
- GAS — PROPOSED GAS
- UGC — PROPOSED UNDERGROUND CABLE
- W — PROPOSED DOMESTIC WATER
- PROPOSED DOORWAY
- PROPOSED TREE
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD LIGHT
- PROPOSED DUMPSTERS
- CTE — CONNECT TO EXISTING
- VIF — VERIFY IN FIELD

MATCHLINE SEE SHEET 1

TW = 148.00
BW = 144.00

53 L.F. – 8" PVC ROOF DRAIN INV. 138.11

C.T.E. V.I.F.

16 L.F. – 8" PVC ROOF DRAIN INV. 137.27

39' L.F. – 24" HDPE

CB-30 TYPE 'C-L' CB

8' L.F. – 12" HDPE

MH-3 STORM MH (TYP.)

MH-4 NEW 'DOGHOUSE' MH ON EXISTING STORM SEWER EXISTING 24" INV. SE: 125.74 (VERIFY IN FIELD)

MH-5 STORM MH (TYP.) 7 L.F. – 8" PVC ROOF DRAIN INV. 136.55

INV. NW: 133.81 (NEW 8" PVC) INTO EXISTING MH.

LIMIT OF NEW PAVEMENT SAWCUT & MATCH FLUSH (TYP.)

169' L.F. – 12" HDPE

FFE = 141.67

12' L.F. – 12" HDPE

CB-21 TYPE 'C' CB

SAMPLING POINT 2

215' L.F. – 10" PVC ROOF DRAIN INV.: 138.8

FFE = 139.67

EXISTING STORM MH (TYP.) T.F.: 137.06 INV. NW: 129.92 (NEW 12" HDPE) INV. SE: 124.9 (EXISTING 18" RCP)

11' L.F. – 12" HDPE

MH-6 HYDRODYNAMIC SEPARATOR W/ MANHOLE TOP

CB-22 TYPE 'C' CB

CB-23 TYPE 'C' CB

9' L.F. – 12" HDPE

UNDERGROUND RETENTION SYSTEM 1 CHAMBER INV. = 132.5 ROCK INV. = 132.0 NUMBER OF CHAMBERS = 264

CB-24 TYPE 'C' CB

SAMPLING POINT 3

INV. IN: 132.50

46' TEMPORARY 8" PVC ROOF DRAIN

FFE = 153.00

51' L.F. – 8" PVC ROOF DRAIN INV.: 150.50

PERFORATED UNDERDRAIN AROUND PERIMETER OF SYSTEM. INV. = 132.0 CONNECT TO DOWNSTREAM SIDE OF O.C.S #1

CB-26 TYPE 'C' CB

49' L.F. – 15" HDPE

40' L.F. – 15" HDPE

MH-7 NEW 'DOGHOUSE' MH ON EXISTING STORM SEWER (VERIFY EXISTING INVERTS IN FIELD)

CB-27 TYPE 'C' CB

INV. OUT = 132.50

40' L.F. – 15" HDPE

5' L.F. – 15" HDPE

57 L.F. –15" HDPE

INV. IN: 132.50

15' L.F. – 15" HDPE

OUTLET CONTROL STRUCTURE 1 T.F.: 136.27 WEIR: 134.02 INV. NW: 132.50 INV. NE: 127.21 (EXISTING 15")

CB-28 HYDRODYNAMIC SEPARATOR W/ TYPE 'C' CB

CB-29 TYPE 'C' CB

SAMPLING POINT 4 (EXISTING CB NORTH OF CONCESSION BLDG.)

GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

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REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS
NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
GRADING & DRAINAGE PLAN 02

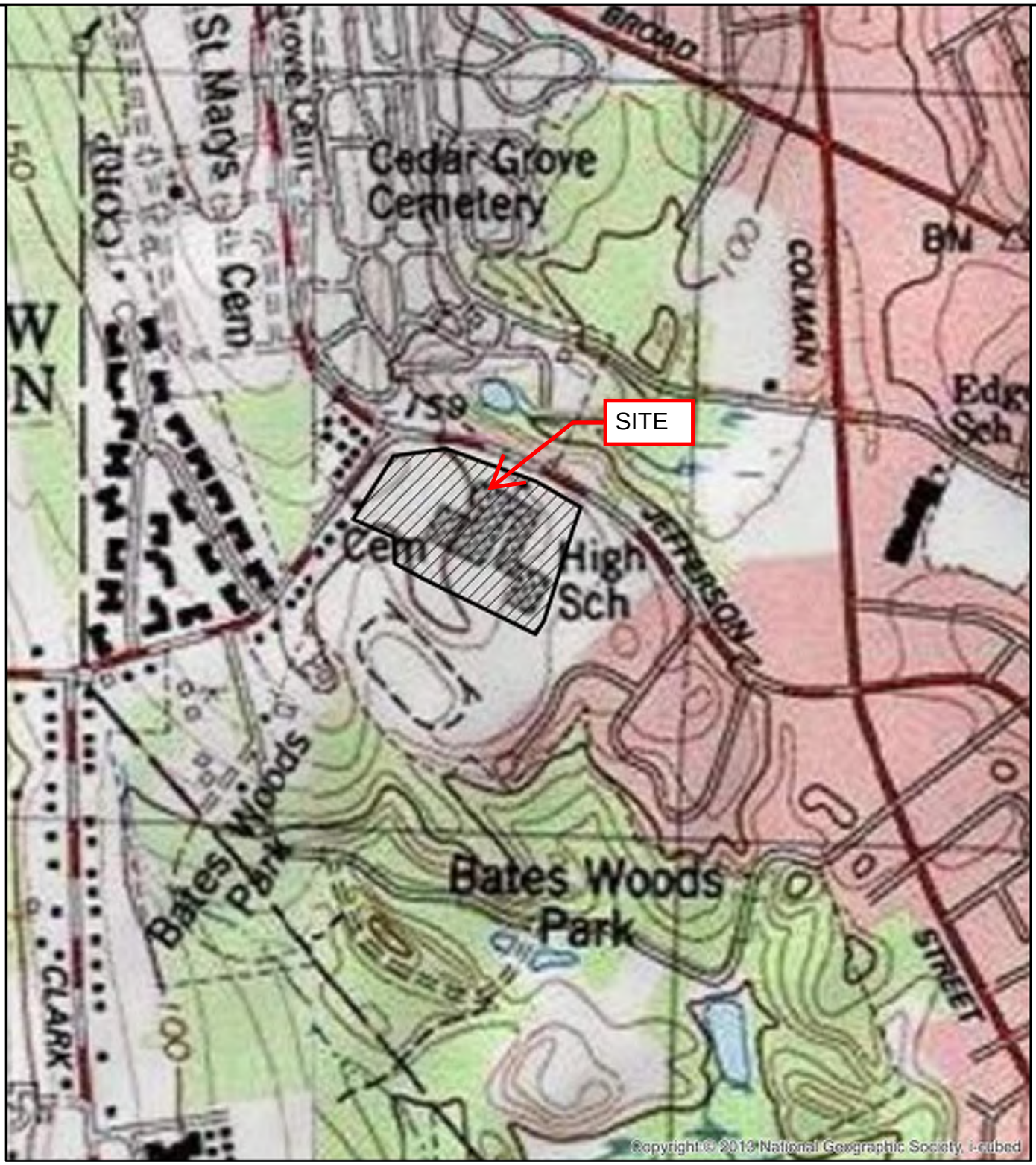
SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-107

DATE:	JOB NUMBER:
10 JANUARY 2020	15050

ATTACHMENT 1

USGS Site Location Map



SCALE:
1 inch = 10,000 ft.

Stantec

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55 Church Street Suite 601
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Client/Project
NEW LONDON HIGH SCHOOL ADDITIONS & RENOVATIONS

Project No.
192310898

Title
NCRS HYDROLOGIC SOIL MAP

Revision	Date
=	2020.02.20
Reference Sheet	Figure No.

U:\192310898\report\drainage\20181220_watershed map
2020.01.21 10:15:39 AM

ATTACHMENT 2

NDDB Map

Natural Diversity Data Base Areas

NEW LONDON, CT

December 2019

State and Federal Listed Species

Critical Habitat

Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Critical Habitats. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a variety of data sources . Exact locations of species have been buffered to produce the generalized locations.

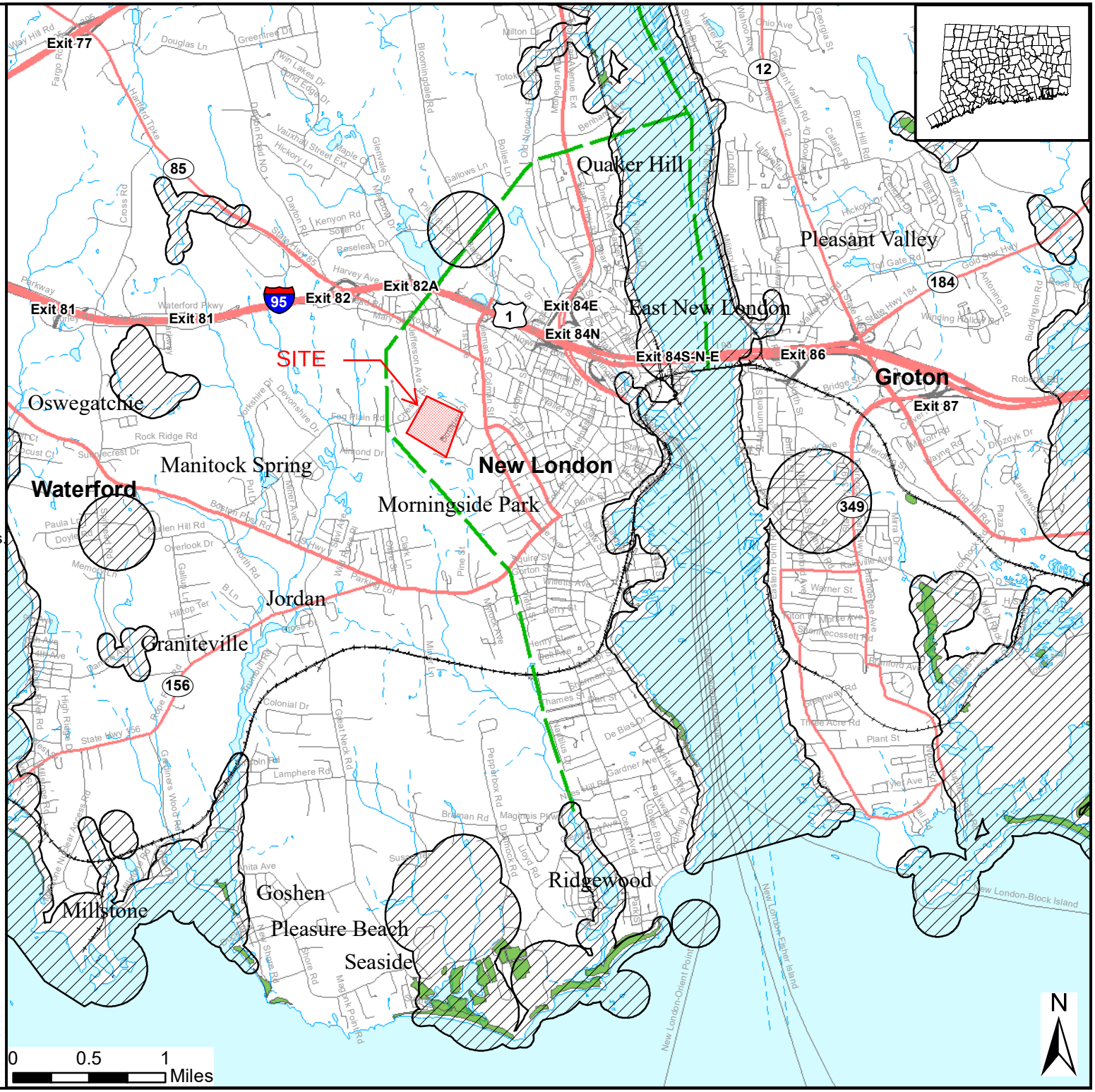
This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a hatched area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

www.ct.gov/deep/nddbrequest

Use the CTECO Interactive Map Viewers at www.cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St, Hartford, CT 06106
email: deep.nddbrequest@ct.gov
Phone: (860) 424-3011

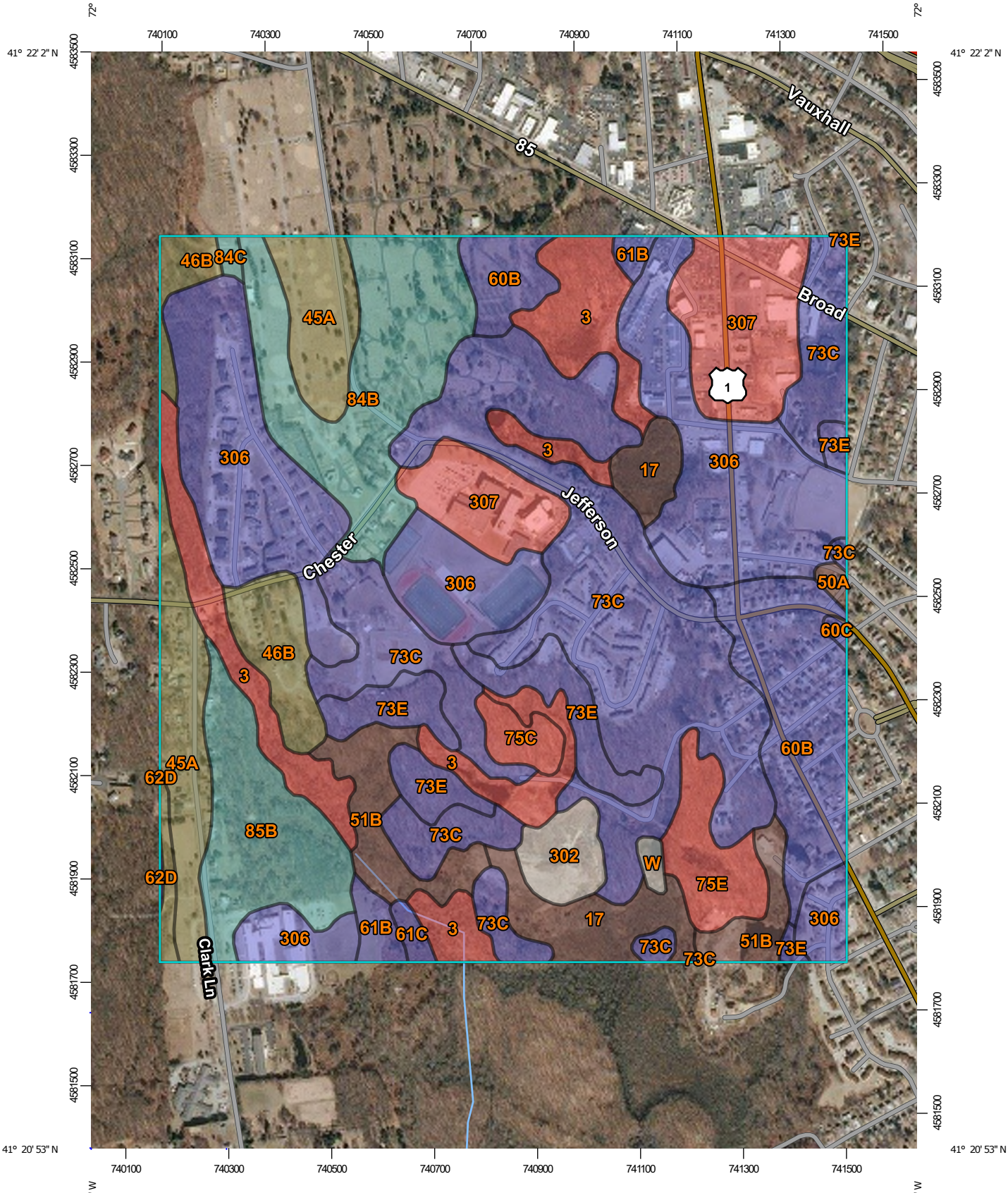
Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



ATTACHMENT 3

NCRS Hydrologic Soil Group Map

Hydrologic Soil Group—State of Connecticut



Map Scale: 1:10,300 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 19, Sep 13, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 20, 2019—Mar 27, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D	36.5	7.9%
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	B/D	15.1	3.2%
45A	Woodbridge fine sandy loam, 0 to 3 percent slopes	C/D	26.3	5.7%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	C/D	15.3	3.3%
50A	Sutton fine sandy loam, 0 to 3 percent slopes	B/D	0.9	0.2%
51B	Sutton fine sandy loam, 0 to 8 percent slopes, very stony	B/D	15.6	3.3%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	B	31.1	6.7%
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	B	0.5	0.1%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	B	4.0	0.9%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	B	1.4	0.3%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	B	0.2	0.0%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	B	101.5	21.8%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	B	19.3	4.2%
75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes	D	4.0	0.9%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

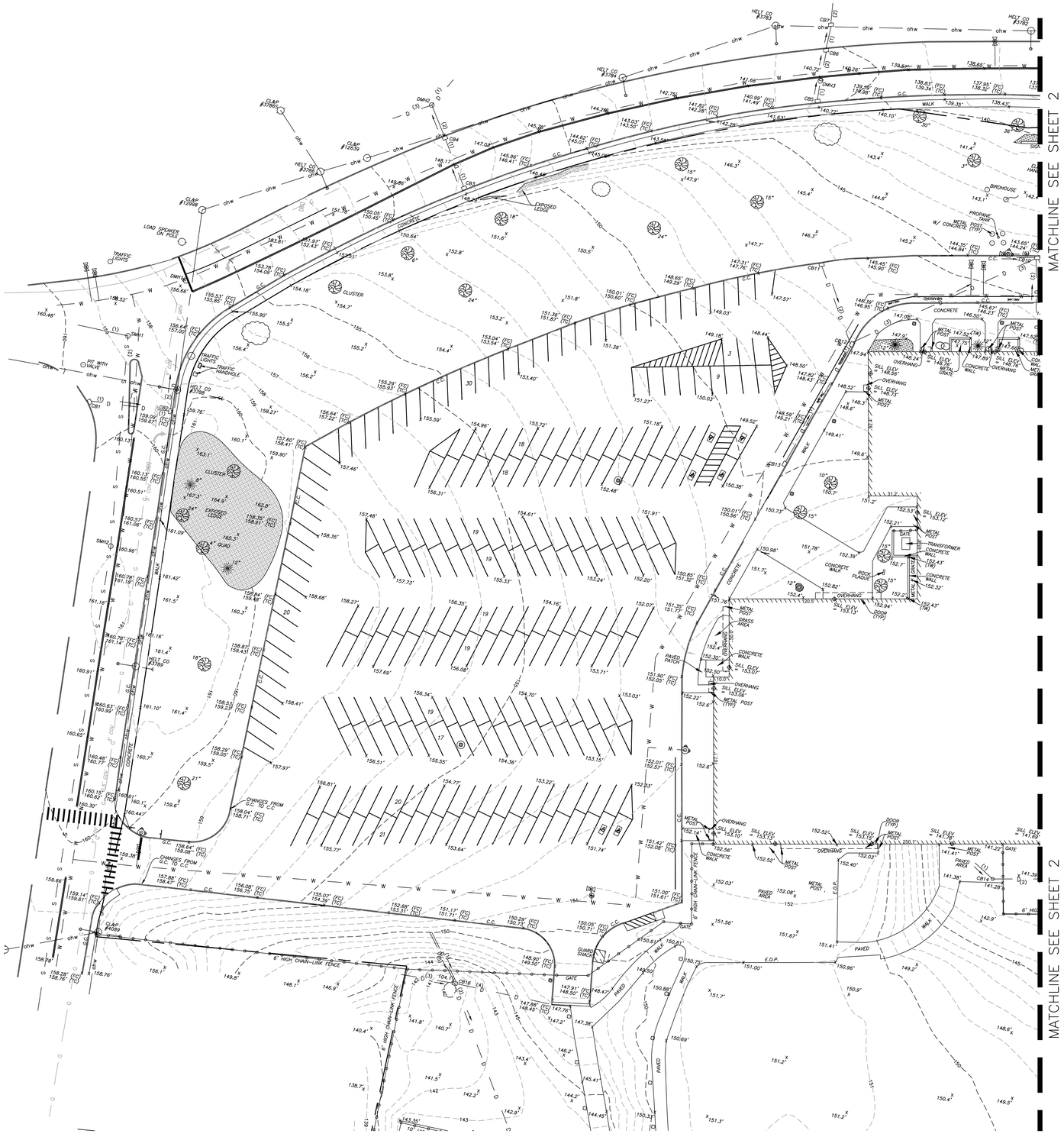
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

ATTACHMENT 4

Site Plans

1. Figure 1 – Drainage Area Map, Existing Conditions
2. Figure 2 – Drainage Area Map, Proposed Conditions
3. C-100 – Existing Conditions
4. C-101 – Demolition, SEC, and Site Logistics Plan
5. C-102 – Site Layout and Materials Plan
6. C-103 – Grading, Drainage, and Utilities Plan
7. C-201 – Site Details
8. C-202 – Site Details
9. C-203 – Site Details
10. C-204 – Sediment and Erosion Control Notes and Details
11. L-100 – Landscape Layout & Materials Plan
12. L-101 – Site Planning Enlargements
13. L-200 – Landscape Details – 1
14. L-201 – Landscape Details – 2



NOTES

1) THIS SURVEY PLAN HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTION 20-300B-1 THROUGH 20-300B-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF THE LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

A. TYPE OF SURVEY: TOPOGRAPHIC SURVEY
B. WITH RESPECT TO THE PERIMETER OF THE PROPERTY THE BOUNDARY DETERMINATION IS BASED UPON A FIRST SURVEY.
C. THIS SURVEY CONFORMS TO THE STANDARDS AND THE ACCURACY OF CLASS: A-2 HORIZONTAL & T-2 TOPOGRAPHIC ACCURACY.
D. BEARINGS AS DEPICTED ARE BASED UPON THE CONNECTICUT GRID SYSTEM, NORTH AMERICAN DATUM OF 1983 UTILIZING TM1 & TM4 WITH THE FOLLOWING PUBLISHED COORDINATES: TM1 = N695298.09 E1171359.26 TM4 = N693482.25 E1174751.44
E. CONVERTED HORIZONTAL CONTROL INFORMATION FROM NAD 1927 TO NAD 1983 WITH CORPSCON 6.0.1 PROVIDED BY THE US ARMY CORPS OF ENGINEERS
F. ELEVATIONS BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 UTILIZING TM1 WITH THE FOLLOWING PUBLISHED ELEVATION = 202.16'
G. CONTOUR INTERVAL = 1'
H. THE INTENT OF THIS MAP IS DEPICT THE EXISTING CONDITIONS OF THIS PROPERTY.
i. SURVEY ONLY SHOWS PARTIAL BOUNDARY LIMITS FOR PROJECT REMAINDER OF BOUNDARY TAKEN FROM ASSESSOR MAPPING OF THE CITY OF NEW LONDON.

2) BOUNDARY LINES OF ADJOINING PROPERTIES ARE SHOWN FOR GENERAL INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE CONSTRUED AS BEING ACCURATELY LOCATED OR DEPICTED.

3) THE WORD "CERTIFY" AS USED IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE SURVEYOR. IT IS A DECLARATORY STATEMENT, WHICH IS BASED ON HIS BEST KNOWLEDGE, INFORMATION AND BELIEF. AS SUCH IT CONSTITUTES NEITHER GUARANTEE NOR WARRANTY, EXPRESSED OR IMPLIED, OF ANY INFORMATION CONTAINED HEREON. NO CERTIFICATION IS EXPRESSED OR IMPLIED ON ANY ORIGINAL OR ANY DUPLICATE OF THIS MAP UNLESS IT BEARS AN ORIGINAL STAMP OR SEAL AND ORIGINAL SIGNATURE OF THE INDIVIDUAL WHOSE REGISTRATION NUMBER APPEARS HEREON.

4) THIS MAP IS THE PROPERTY OF GESICK & ASSOCIATES P.C. AND HAS BEEN SPECIFICALLY PREPARED FOR THE OWNER OF THE PROJECT OR PROPERTY. IT IS NOT TO BE DUPLICATED OR USED IN PART OR WHOLE FOR ANY OTHER PURPOSE, PROJECT, LOCATION, OR OWNER WITHOUT THE EXPRESS WRITTEN CONSENT OF GESICK & ASSOCIATES P.C.

5) BASE MAPPING PREPARED BY GESICK & ASSOCIATES P.C. FROM A 6/07/2017 THRU 3/6/2018 FIELD SURVEYS.

6) UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND LIMITED FIELD MEASUREMENTS. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE. THE EXISTENCE OF WHICH ARE UNKNOWN TO GESICK & ASSOCIATES P.C. THE SIZE LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

7) TREES SHOWN ON THIS MAP WERE FIELD LOCATED BUT ARE NOT SHOWN TO SCALE.

8) UNLESS OTHERWISE NOTED, BUILDING OFFSETS ARE TO BUILDING SIDING ABOVE THE FOUNDATION

Reference Maps

1. "CONNECTICUT STATE HIGHWAY DEPARTMENT RIGHT OF WAY MAP
TOWN OF NEW LONDON JEFFERSON AVENUE FROM BROAD STREET
SOUTHERLY & EASTERLY TO ROOSEVELT STREET ROUTE NO.340"
PREPARED BY THE CONNECTICUT STATE HIGHWAY DEPARTMENT
DATED APRIL 30, 1932 SCALE 1"=40' DRAWING NUMBER 94-01 SHEETS 1-3 OF 3
2. "SITE DEVELOPMENT GRADING PLAN - EAST HALF, NEW LONDON HIGH SCHOOL
JEFFERSON AVENUE, NEW LONDON CONNECTICUT"
PREPARED BY SCHOLFIELD, LINDSAY & LIEBIG & JAMES F. NEILAN
DATED AUGUST 16, 1967 SCALE 1"=40' SHEETS 1 & 4 OF 4
3. "TOPOGRAPHIC SURVEY PREPARED FOR NEW LONDON HIGH SCHOOL
490 JEFFERSON AVENUE, NEW LONDON CONNECTICUT"
PREPARED BY FLYNN & CYR LAND SURVEYING LLC.
DATED OCTOBER 12, 2001 SCALE 1"=50'
4. "RENOVATIONS TO NEW LONDON HIGH SCHOOL ATHLETIC FACILITIES
PROGRESS SET 490 JEFFERSON AVENUE, NEW LONDON CONNECTICUT"
PREPARED BY KAESTLE BOOS ASSOCIATES, INC.
DATED FEBRUARY 11, 2003 SCALE 1"=40' SHEETS 1-11 OF 11
5. "TOPOGRAPHIC SURVEY PREPARED FOR NEW LONDON HIGH SCHOOL
490 JEFFERSON AVENUE, NEW LONDON CONNECTICUT"
PREPARED BY FLYNN & CYR LAND SURVEYING LLC
DATED OCTOBER 12, 2001 REVISED THRU MARCH 5, 2003 SCALE 1"=50'
6. "RENOVATION TO NEW LONDON HIGH SCHOOL ATHLETIC FACILITIES CONSERVATION COMMISSION
SUBMITTAL 490 JEFFERSON AVENUE, NEW LONDON CONNECTICUT"
PREPARED BY KAESTLE BOOS ASSOCIATES, INC.
DATED MARCH 13, 2003 SCALE VARIOUS SHEETS 1-7 OF 7
7. "NEW LONDON HIGH SCHOOL ATHLETIC FACILITY
490 JEFFERSON AVENUE, NEW LONDON CONNECTICUT"
PREPARED BY FRIAR ASSOCIATES INC., PURCELL ASSOCIATES & JUA SPORTS
DATED SEPTEMBER 16, 2009 SCALE VARIOUS SHEETS 1-32 OF 32
8. "CHALLENGER LEARNING CENTER OF SOUTHEASTERN CT
NEW LONDON CT"
PREPARED BY CLA ENGINEERS, INC.
DATED AUGUST, 2007 SCALE 1"=40' SHEETS 1-4 OF 4
9. "CITY OF NEW LONDON NEW LONDON HIGH SCHOOL
ATHLETIC FIELD RENOVATIONS 490 JEFFERSON AVENUE"
PREPARED BY PURCELL ASSOCIATES
DATED JUNE 12, 2009 SCALE 1"=20' SHEETS 1-7 OF 7
10. "SCIENCE & TECHNOLOGY MAGNET SCHOOL OF SOUTHEASTERN CONNECTICUT
490 JEFFERSON AVENUE, NEW LONDON CONNECTICUT"
PREPARED BY FRIAR ASSOCIATES, INC.
DATED AUGUST 14, 2009 SCALE VARIOUS SHEETS 1- 11 OF 11
11. "PROPERTY / BOUNDARY SURVEY ALTA/ACSM LAND TITLE SURVEY PLAN PREPARED FOR
CARABETTA ORGANIZATION BATES WOODS, JEFFERSON AVENUE NEW LONDON CONNECTICUT"
PREPARED BY MEEHAN & GOODIN ENGINEERS & SURVEYORS P.C.
DATED OCTOBER 20, 2009 REVISED THRU AUGUST 22, 2011 SCALE 1" = 40' SHEETS 1 & 2 OF 3
12. "ALTA/ACSM LAND TITLE SURVEY OF 432 JEFFERSON AVENUE
NEW LONDON CONNECTICUT PREPARED FOR THE CONNECTION FUND INC"
PREPARED BY BASELINE SURVEYING LLC
DATED JUNE 12, 2012 REVISED THRU AUGUST 13, 2013 SCALE 1" = 20'

GRAPHIC SCALE
0' 30' 60' 90'
(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

CERTIFICATION:

CONSULTANT:

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www.stantec.com

REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

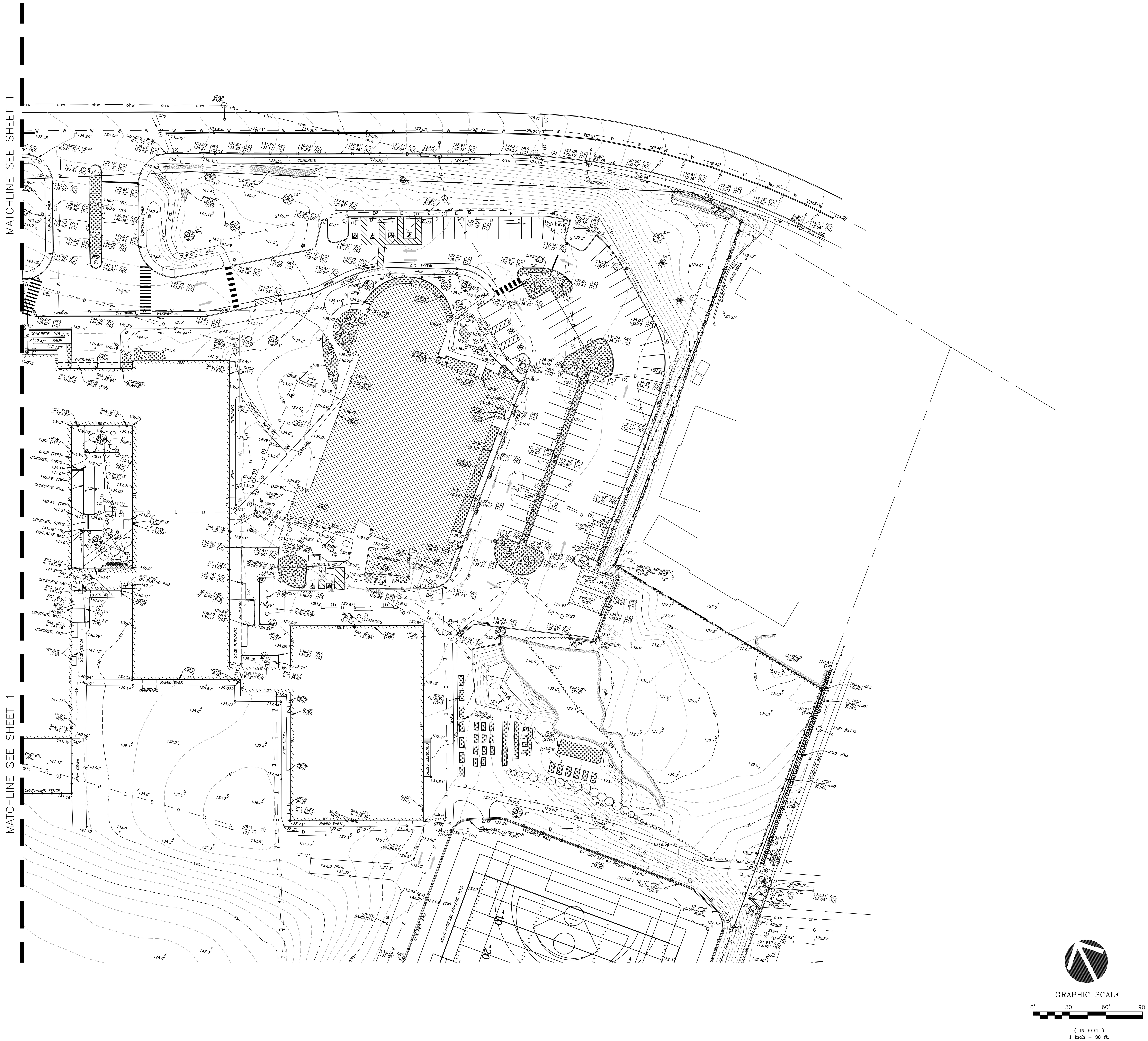
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
Existing Conditions Plan 01

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-100

DATE:	JOB NUMBER:
10 JANUARY 2020	15050



ANTINOZZI ASSOCIATES

ARCHITECTURE & INTERIORS

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CERTIFICATION:

STATE OF CONNECTICUT · ANTONIO DI CAMILLO · No. PEN.0025600 · LICENSED · PROFESSIONAL ENGINEER

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ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS

JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320

STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:

Existing Conditions Plan 02

SCALE:	DRAWN BY:	REVIEWED BY:
AS NOTED	---	---

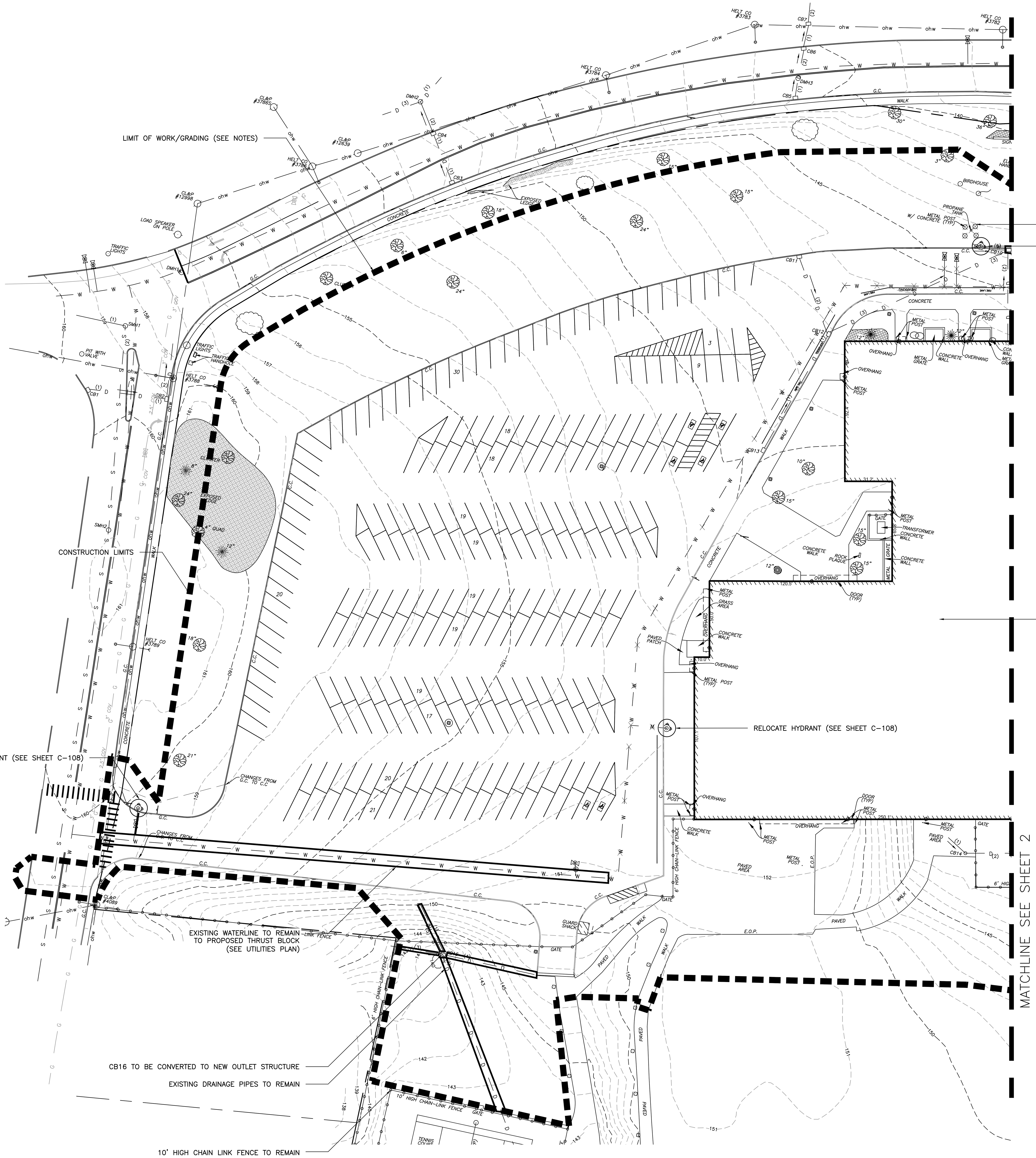
DRAWING NO.

C-101

DATE:	JOB NUMBER:
10 JANUARY 2020	15050

NOTES

1. ALL EXISTING SITE ITEMS OUTSIDE THE EXISTING BUILDING LIMITS INCLUDING BUT NOT LIMITED TO PAVING, CURBING, FENCES, STRUCTURES, FOUNDATIONS, AND FOOTINGS WITHIN THE LIMITS OF PROPOSED WORK/GRADING SHALL BE DEMOLISHED/REMOVED UNLESS OTHERWISE NOTED IN THIS OR ANY OTHER PLANS/SPECIFICATIONS IN THE CONTRACT DOCUMENTS. WHERE REMOVALS CREATE A HOLE/DEPRESSION, CONTRACTOR SHALL FILL THE HOLE WITH SUITABLE MATERIAL UNTIL FINAL CONSTRUCTION TAKES PLACE.
2. SEE LANDSCAPING AND LIGHTING PLAN FOR TREE REMOVAL/PROTECTION.
3. TREES SHOWN TO BE REMOVED SHALL BE MARKED (WITH RIBBON ONLY) AND SHALL BE REIVEWED BY CITY AND LANDSCAPE ARCHITECT PRIOR TO REMOVAL.



GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

CERTIFICATION:

CONSULTANT:

Stantec

REVISIONS:

DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS

JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320

STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
Demolition Plan
Plan 01

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-102

DATE:	JOB NUMBER:
10 JANUARY 2020	15050

NOTES

1. ALL EXISTING SITE ITEMS OUTSIDE THE EXISTING BUILDING LIMITS INCLUDING BUT NOT LIMITED TO PAVING, CURBING, FENCES, STRUCTURES, FOUNDATIONS, AND FOOTINGS WITHIN THE LIMITS OF PROPOSED WORK/GRADING SHALL BE DEMOLISHED/REMOVED UNLESS OTHERWISE NOTED IN THIS OR ANY OTHER PLANS/SPECIFICATIONS IN THE CONTRACT DOCUMENTS. WHERE REMOVALS CREATE A HOLE/DEPRESSION, CONTRACTOR SHALL FILL THE HOLE WITH SUITABLE MATERIAL UNTIL FINAL CONSTRUCTION TAKES PLACE.
2. SEE LANDSCAPING AND LIGHTING PLAN FOR TREE REMOVAL/PROTECTION.
3. TREES SHOWN TO BE REMOVED SHALL BE MARKED (WITH RIBBON ONLY) AND SHALL BE REIVEWED BY CITY AND LANDSCAPE ARCHITECT PRIOR TO REMOVAL.

REMOVE AND REPLACE EXISTING LIGHT POLE & BASE

EXISTING 15" RCP TO REMAIN

CONVERT EXISTING CATCHBASIN TO MANHOLE

EXISTING STORM DRAINS & STRUCTURES, SIDEWALKS, AND WATER LINES TO REMAIN

REMOVE AND REPLACE EXISTING LIGHT POLE & BASE

SEE ARCHITECTURAL PLANS FOR BUILDING REMOVALS

DEMOLISH/REMOVE ALL EXISTING SITE ITEMS WITHIN THE COURTYARD UNLESS OTHERWISE NOTED.

EXISTING SMH11 AND EXISTING OUTLET PIPE TO THE EAST REMAIN

MATCHLINE SEE SHEET 1

REMOVE OIL TANK (SEE SPECIFICATIONS FOR FULL SCOPE OF WORK)

LIMIT OF WORK/GRADING (SEE NOTES)

EXISTING LIGHT POLE & BASE TO REMAIN

EXISTING STORM, ELECTRICAL, AND WATER STRUCTURES AND PIPES TO REMAIN

EXISTING STORM, SANITARY, & ELECTRICAL STRUCTURES AND PIPES TO REMAIN

EXISTING 15" RCP STORM TO REMAIN

GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

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ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
Demolition Plan
Plan 02

SCALE:	DRAWN BY:	REVIEWED BY:
AS NOTED	---	---

DRAWING NO.

C-103

DATE:	JOB NUMBER:
10 JANUARY 2020	15050

ZONING REQUIREMENTS:

APPLICANT/OWNER: CITY OF NEW LONDON

ZONE: R–1A	REQUIRED	PROVIDED
MINIMUM LOT AREA	5,000 SF	2,148,379 SF
MAXIMUM LOT COVERAGE	0.25	0.06
MAXIMUM BLD. HEIGHT (ADDITION)	2.5 STORIES/35'	51.54'*
MINIMUM FRONTAGE	50'	1,176.3 FT.
MINIMUM LOT WIDTH	50'	1,029.9 FT.
MINIMUM SETBACKS (BLDG. ADDITION)		
FRONT	25 FT.	125 FT.
SIDE	6 FT.	175 FT.
REAR	25 FT.	175 FT.

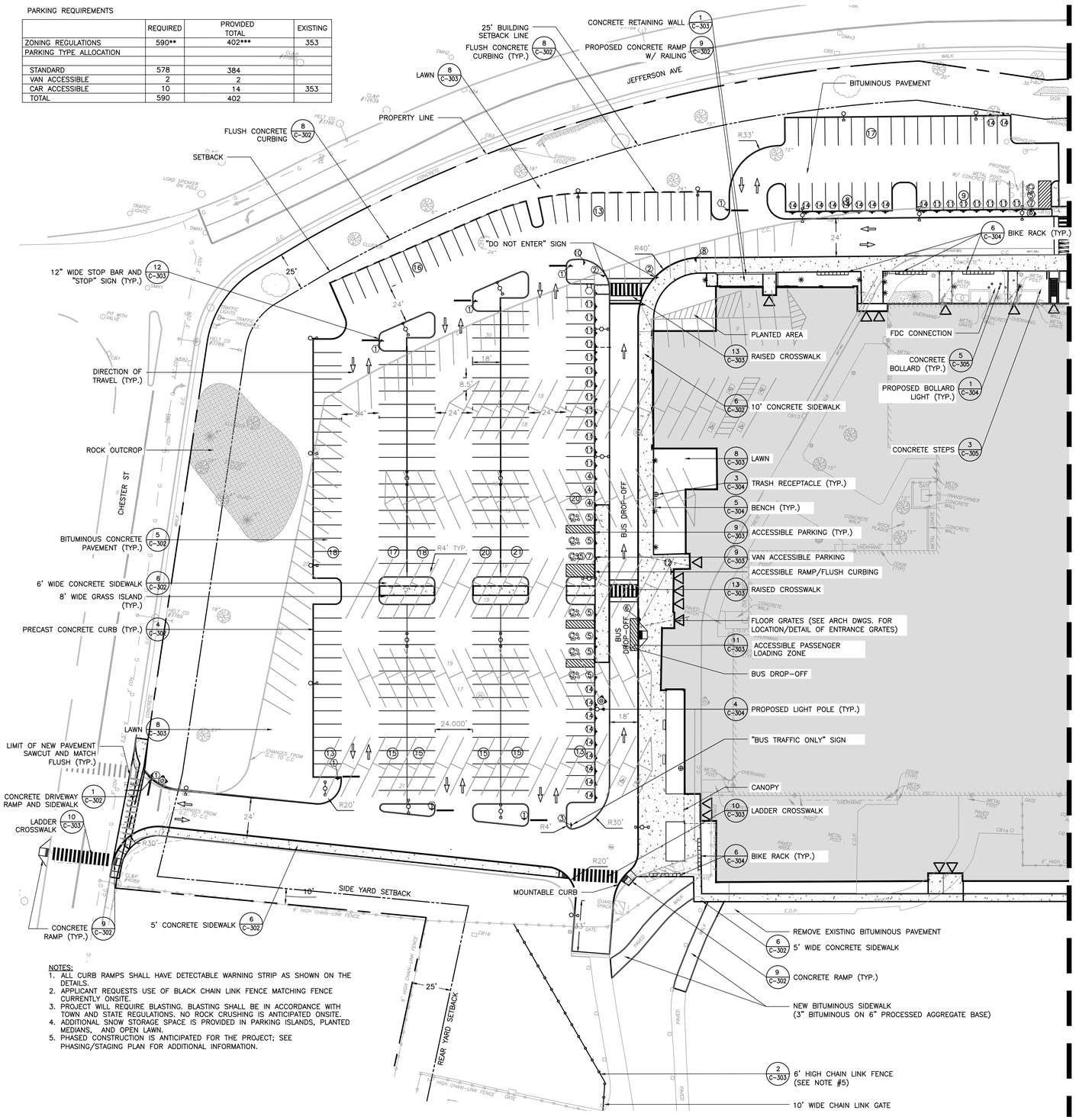
* ELEVATOR TOWER BUILDING HEIGHT = 51.54'. BUILDING ADDITION HEIGHT 28.95'. APPLICANT REQUESTS A WAIVER FROM THE PLANNING & ZONING COMMISSION FOR BUILDING HEIGHT REQUIREMENT FOR ELEVATOR TOWER ONLY.

**ONE SPACE PER FOUR ASSEMBLY AREA SEATS (1,000 TOTAL SEATS, BASED ON PROPOSED AUDITORIUM) = 250 SPACES IN ADDITION TO FOUR SPACES PER CLASSROOM (85 CLASSROOMS) = 340
TOTAL # PARKING SPACES REQUIRED = 250 + 340 = 590.

***APPLICANT REQUESTS A WAIVER FROM THE PLANNING & ZONING COMMISSION FOR THE PARKING REQUIREMENT. SEE APPLICATION NARRATIVE/RESPONSES TO COMMENTS FOR ADDITIONAL INFORMATION.

PARKING REQUIREMENTS

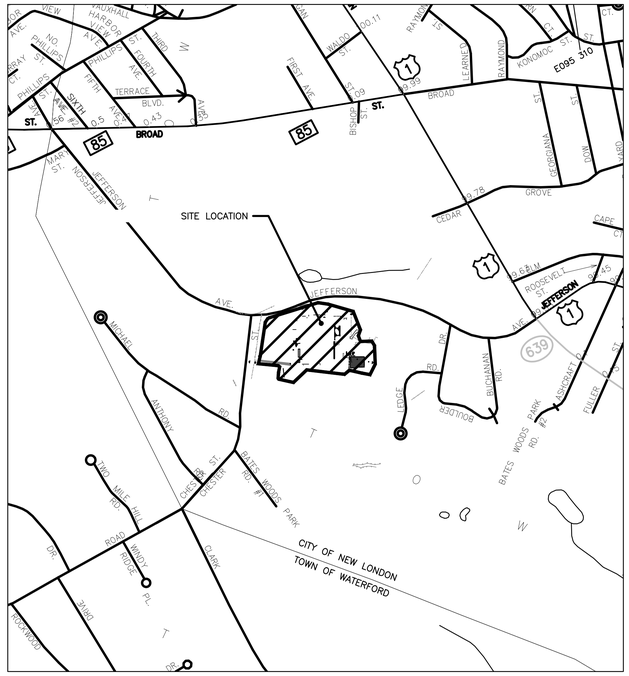
	REQUIRED	PROVIDED TOTAL	EXISTING
ZONING REGULATIONS	590**	402***	353
PARKING TYPE ALLOCATION			
STANDARD	578	384	
VAN ACCESSIBLE	2	2	
CAR ACCESSIBLE	10	14	353
TOTAL	590	402	



NOTES:
1. ALL CURB RAMPS SHALL HAVE DETECTABLE WARNING STRIP AS SHOWN ON THE DETAILS.
2. APPLICANT REQUESTS USE OF BLACK CHAIN LINK FENCE MATCHING FENCE CURRENTLY ONSITE.
3. PROJECT WILL REQUIRE BLASTING. BLASTING SHALL BE IN ACCORDANCE WITH TOWN AND STATE REGULATIONS. NO ROCK CRUSHING IS ANTICIPATED ONSITE.
4. ADDITIONAL SNOW STORAGE SPACE IS PROVIDED IN PARKING ISLANDS, PLANTED MEDIANS, AND OPEN LAWN.
5. PHASED CONSTRUCTION IS ANTICIPATED FOR THE PROJECT; SEE PHASING/STAGING PLAN FOR ADDITIONAL INFORMATION.

MATCHLINE SEE SHEET 2

MATCHLINE SEE SHEET 2



SITE LOCATION MAP
SCALE 1"= 500'

SIGN SCHEDULE

NO.	SIZE (H x W)	COLORS (LETTERS/ BACKGROUND)	MESSAGE	IMAGE	MUTCD REF.	CONNDOT REF.
①	30" x 30"	WHITE/RED (DIAMOND GRADE)	STOP	STOP	R1-1	31-0532
②	30" x 30"	WHITE/RED (DIAMOND GRADE)	DO NOT ENTER		R5-1	31-1109
③	12" x 18"	RED/WHITE	BUS TRAFFIC ONLY	BUS ONLY		
④	--	--	ADMINISTRATIVE STAFF*			
⑤ (9 C-303)	12" x 24"	BLUE/WHITE	HANDICAPPED PARKING		R7-8	31-0629 (D)
⑥ (11 C-303)	12" x 18"	BLUE/WHITE	ACCESSIBLE LOADING ZONE			
⑦	18" x 9"	BLUE/WHITE	VAN ACCESSIBLE	VAN ACCESSIBLE	--	31-0648
⑧	24" x 24"	BLACK/WHITE /RED	NO LEFT TURN		R3-2	
⑨	12" x 18"	RED/WHITE	PARENT DROP-OFF	PARENT DROP-OFF	--	
⑩	24" x 24"	BLACK/WHITE /RED	NO RIGHT TURN		R3-1	
⑪	12" X 18"	GREEN/WHITE	LOW EMITTING AND FUEL EFFICIENT VEHICLE PARKING	LOW EMITTING AND FUEL EFFICIENT VEHICLE PARKING		
⑫	12" X 18"	BLACK/WHITE /RED	NO SMOKING ON THE PREMISES	NO SMOKING ON PREMISES		
⑬	12" X 18"	RED/WHITE	NO PARKING FIRE LANE***	NO PARKING FIRE LANE		
⑭	12" x 18"	GREEN/WHITE	CARPOOL OR VANPOOL PARKING ONLY	CARPOOL OR VANPOOL PARKING ONLY		

* ACTUAL SIGN TEXT TO BE DETERMINED

GRADING NOTE:

SIDEWALK SLOPES SHALL BE 1:20 (5%) OR LESS AND THE CROSS SLOPES SHALL NOT EXCEED 1:50 (2%). CHANGES IN LEVELS SHALL NOT BE GREATER THAN ½ INCH, AND SLOPES SHALL NOT BE GREATER THAN 1/20 UNLESS RAMPS ARE PROVIDED

LEGEND

- PROPOSED DOORWAY
- PROPOSED TREE
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD LIGHT
- PROPOSED DUMPSTERS
- PROPOSED UTILITIES (CHILLERS)
- BIKE RACKS
- LITTER RECEPTACLES
- BENCHES
- CONCRETE SIDEWALK
- SNOW STORAGE AREA
- FLUSH CONDITION
- ACCESSIBLE DOOR
- ACCESSIBLE ROUTE

GRAPHIC SCALE
0' 30' 60' 90'
(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

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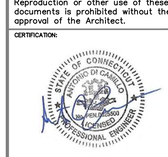

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REVISIONS:

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ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

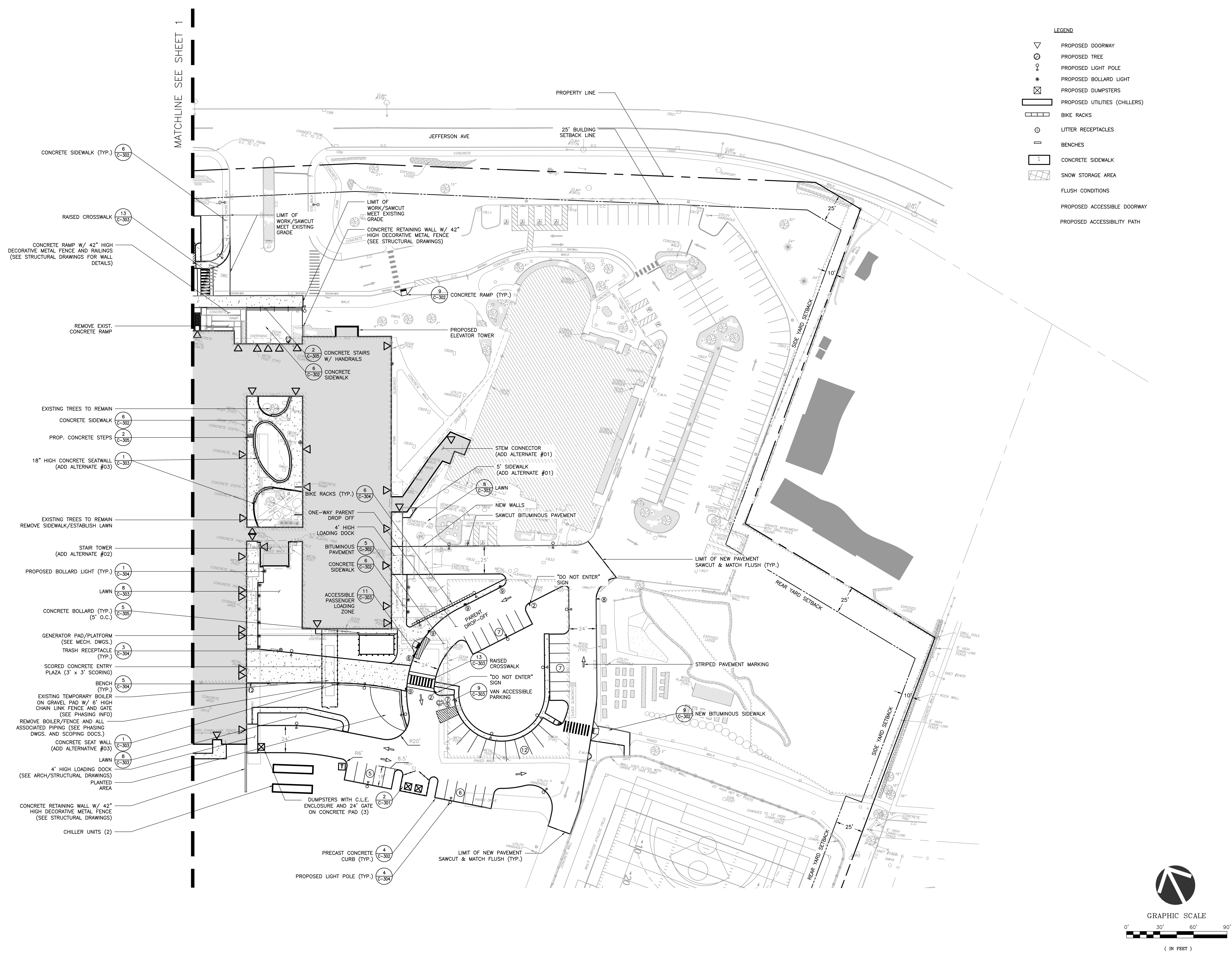
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
Layout & Materials Plan 01

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-104

DATE:	JOB NUMBER:
10 JANUARY 2020	15050



MATCHLINE SEE SHEET 1
LEGEND
PROPOSED DOORWAY
PROPOSED TREE
PROPOSED LIGHT POLE
PROPOSED BOLLARD LIGHT
PROPOSED DUMPSTERS
PROPOSED UTILITIES (CHILLERS)
BIKE RACKS
LITTER RECEPTACLES
BENCHES
CONCRETE SIDEWALK
SNOW STORAGE AREA
FLUSH CONDITIONS
PROPOSED ACCESSIBLE DOORWAY
PROPOSED ACCESSIBILITY PATH
JEFFERSON AVE
PROPERTY LINE
25' BUILDING SETBACK LINE
CONCRETE SIDEWALK (TYP.) 6 C-302
RAISED CROSSWALK 13 C-303
CONCRETE RAMP W/ 42" HIGH DECORATIVE METAL FENCE AND RAILINGS (SEE STRUCTURAL DRAWINGS FOR WALL DETAILS)
REMOVE EXIST. CONCRETE RAMP
LIMIT OF WORK/SAWCUT MEET EXISTING GRADE
CONCRETE RETAINING WALL W/ 42" HIGH DECORATIVE METAL FENCE (SEE STRUCTURAL DRAWINGS)
CONCRETE RAMP (TYP.) 9 C-302
PROPOSED ELEVATOR TOWER
CONCRETE STAIRS W/ HANDRAILS 2 C-305
CONCRETE SIDEWALK 6 C-302
EXISTING TREES TO REMAIN
CONCRETE SIDEWALK 6 C-302
PROP. CONCRETE STEPS 2 C-305
18" HIGH CONCRETE SEATWALL (ADD ALTERNATE #03) 1 C-303
BIKE RACKS (TYP.) 6 C-304
ONE-WAY PARENT DROP OFF
4' HIGH LOADING DOCK
BITUMINOUS PAVEMENT 5 C-302
CONCRETE SIDEWALK 6 C-302
ACCESSIBLE PASSENGER LOADING ZONE 11 C-303
EXISTING TREES TO REMAIN
REMOVE SIDEWALK/ESTABLISH LAWN
STAIR TOWER (ADD ALTERNATE #02)
PROPOSED BOLLARD LIGHT (TYP.) 1 C-304
LAWN 8 C-303
CONCRETE BOLLARD (TYP.) (5' O.C.) 5 C-305
GENERATOR PAD/PLATFORM (SEE MECH. DWGS.)
TRASH RECEPTACLE (TYP.) 3 C-304
SCORED CONCRETE ENTRY PLAZA (3' x 3' SCORING)
BENCH (TYP.) 5 C-304
EXISTING TEMPORARY BOILER ON GRAVEL PAD W/ 6' HIGH CHAIN LINK FENCE AND GATE (SEE PHASING INFO)
REMOVE BOILER/FENCE AND ALL ASSOCIATED PIPING (SEE PHASING DWGS. AND SCOPING DOCS.)
CONCRETE SEAT WALL (ADD ALTERNATIVE #03) 1 C-303
LAWN 8 C-303
4' HIGH LOADING DOCK (SEE ARCH/STRUCTURAL DRAWINGS)
PLANTED AREA
CONCRETE RETAINING WALL W/ 42" HIGH DECORATIVE METAL FENCE (SEE STRUCTURAL DRAWINGS)
CHILLER UNITS (2)
STEM CONNECTOR (ADD ALTERNATE #01)
5' SIDEWALK (ADD ALTERNATE #01)
LAWN 8 C-303
NEW WALLS
SAWCUT BITUMINOUS PAVEMENT
LIMIT OF NEW PAVEMENT SAWCUT & MATCH FLUSH (TYP.)
"DO NOT ENTER" SIGN
PARENT DROP-OFF
RAISED CROSSWALK 13 C-303
"DO NOT ENTER" SIGN
VAN ACCESSIBLE PARKING 9 C-303
STRIPED PAVEMENT MARKING
NEW BITUMINOUS SIDEWALK 9 C-302
DUMPSTERS WITH C.L.E. ENCLOSURE AND 24' GATE ON CONCRETE PAD (3) 2 C-301
PRECAST CONCRETE CURB (TYP.) 4 C-302
PROPOSED LIGHT POLE (TYP.) 4 C-304
LIMIT OF NEW PAVEMENT SAWCUT & MATCH FLUSH (TYP.)
SIDE YARD SETBACK
REAR YARD SETBACK
GRAPHIC SCALE
0' 30' 60' 90'
(IN FEET)
1 inch = 30 ft.

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ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

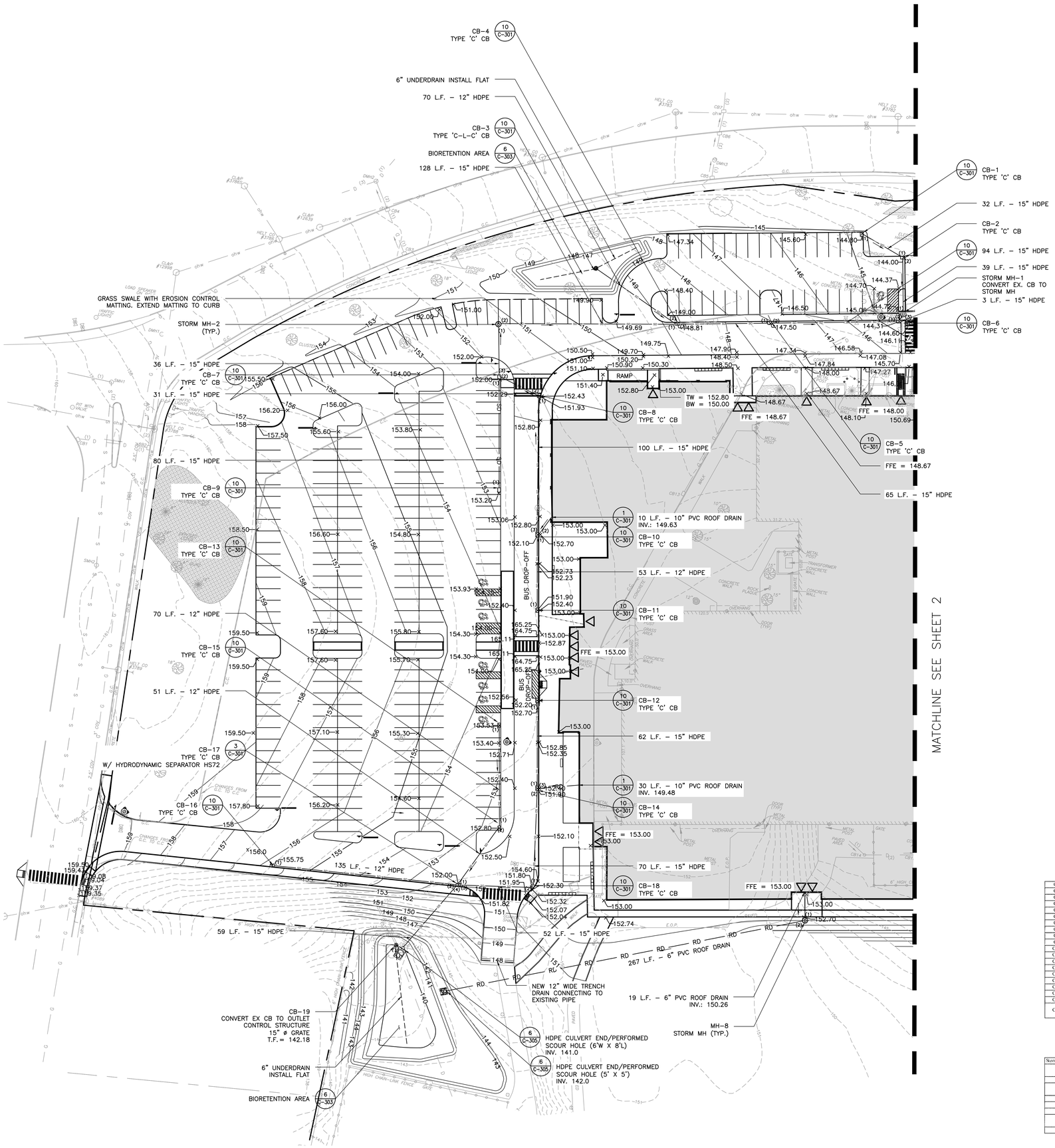
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
Layout & Materials Plan 02

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-105

DATE:	JOB NUMBER:
10 JANUARY 2020	15050



LEGEND

- UNDERGROUND RETENTION SYSTEM
- S — PROPOSED SANITARY SEWER
- SD — PROPOSED STORM SEWER
- UGE — PROPOSED UNDERGROUND ELECTRIC
- FP — PROPOSED FIRE PROTECTION
- GAS — PROPOSED GAS
- UGC — PROPOSED UNDERGROUND CABLE
- W — PROPOSED DOMESTIC WATER
- PROPOSED DOORWAY
- PROPOSED TREE
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD LIGHT
- PROPOSED DUMPSTERS

GENERAL NOTES:

1. ALL UNDERGROUND UTILITY INFORMATION AS SHOWN ON THESE PLANS SHALL BE CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION. THE CONTRACTOR SHALL CALL 1–800–922–4455 "CALL BEFORE YOU DIG" TWO DAYS PRIOR TO BEGINNING ANY EXCAVATION AT THE SITE.

2. PROTECT EXISTING UTILITIES FROM DAMAGE. ACTIVE UTILITY LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL SUBSURFACE UTILITIES PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL USE CARE DURING CONSTRUCTION TO AVOID DAMAGING ANY UTILITIES AND STRUCTURES NOT SCHEDULED FOR REMOVAL . THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: EXISTING ELECTRICAL, CABLE, TELEPHONE, SEWER AND WATER LINES, DRAINAGE STRUCTURES, VALVES, SITE FURNISHINGS, CURBS, PAVEMENT AND PLANTINGS. ANY DAMAGE RESULTING FROM THIS CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER OR TO THE UTILITY OWNER.

4. ABANDONED SURFACE AND SUBSURFACE UTILITIES I.E. WATER, ELECTRIC, TELEPHONE, GAS, STORM SEWER, SANITARY LINES, CONCRETE FOOTINGS AND FOUNDATIONS UNCOVERED DURING CONSTRUCTION SHALL BE REMOVED WHEN NECESSARY AND AS APPROVED BY THE ENGINEER TO PERMIT NEW CONSTRUCTION.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND COORDINATE WITH ALL UTILITY COMPANIES (WATER, SEWER, ELECTRICAL, ETC...) FOR CONNECTIONS AND OR RELOCATIONS TO EXISTING SERVICES.

6. TEST PIT MAY BE REQUIRED TO DETERMINE LOCATIONS OF EXISTING UTILITIES AND PRESENCE OF ANY UTILITIES NOT SHOWN OF SURVEY. CONTACT DESIGN ENGINEER IF UNFORESEEN OBSTRUCTIONS ARE ENCOUNTERED.

7. SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY PRIOR TO THE START OF GRADING AND MAINTAINED UNTIL ALL GROUND SURFACES ARE STABILIZED I.E. WITH TURF, PAVEMENTS, ETC.

8. SEE SITE LOGISTICS PLAN FOR ADDITIONAL INFORMATION REGARDING STAGING/STORAGE AREA AND LIMITS OF CONSTRUCTION FENCING, GATES, ETC.. ALL SITE ITEMS SUCH AS PAVEMENT, CURBS, TREES, UTILITIES, LAWN, ETC. OUTSIDE THE CONTRACT LIMIT LINE FOR THE BASE BID SHALL BE PROTECTED IN PLACE. ANY DAMAMGE TO EXISTING ITEMS NOT SCHEDULED TO BE DEMOLISHED/REMOVED SHALL BE REPAIRED IN KIND BY THE CONTRACTOR AT HIS EXPENSE.

9. ALL EXISTING UTILIITIES (STRUCTURES AND PIPES) WITHIN THE LIMIT OF WORK SHALL BE ABANDONED UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. TOP 2' OF ALL DRAINAGE STRUCTURES SHALL BE REMOVED AND STRUCTURE SHALL BE FILLED WITH CRUSHED STONE. CAP/ABANDON UTILITY CONNECTIONS TO THE MAINS AT THE STREET IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS. UTILITIES CONFLICITNG WITH PROPSOED WORK SHALL BE REMOVED.

10. ALL DRAINAGE PIPES SHALL BE 12" HDPE UNLESS OTHERWISE NOTED.

12. NO SEDIMENT LADEN WATER SHALL BE SENT TO THE UNDERGROUND RETENTION SYSTEM. FLOWS SHALL BYPASS THE SYSTEMS UNTIL ALL AREAS CONTRIBUTING TO THE SYSTEMS ARE STABLIZED.

13. ACCESSIBLE ROUTES' SLOPES SHALL BE 1:20 (5%) OR LESS AND THE CROSS SLOPES SHALL NOT EXCEED 1:50 (2%). CHANGES IN LEVELS SHALL NOT BE GREATER THAN 1/2 INCH, AND SLOPES SHALL NOT BE GREATER THAN 1/20 UNLESS RAMPS OR LIFTS ARE PROVIDED.

14. STORMWATER: PROPOSED WORK SHALL BE IN ACCORDANCE WITH MS4 REQUIREMENTS. SITE WILL BE SUBJECTED TO PERIODIC INSPECTIONS DURING CONSTRUCTION.

15. WATER: ALL NEW OR MODIFIED CONNECTIONS REQUIRE A PERMIT APPLICATION AND POTENTIAL ASSOCIATED CONNECTION FEE. ALL NEW PIPING MUST BE PRESSURE TESTED AND DISINFECTED PER AWWA STANDARDS. BACKFLOW DEVICES SHALL BE INSTALLED AND INSPECTED PRIOR TO SERVICE BEING TURNED ON.

16. SEWER: ALL NEW OR PROPOSED/MODIFIED CONNECTIONS REQUIRE A PERMIT APPLICATION AND POTENTIAL CONNECTION FEE.

17. EROSION & SEDIMENT CONTROL: EROSION & SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED DURING CONSTRUCTION AND POST CONSTRUCTION UNIL THE SITE IS STABILIZED. ALL CATCH BASINS SHALL BE PROTECTED FROM EROSION & SEDIMENT DURING THAT TIME PERIOD.

CB #	Type	Rim	Sump	Invert #1	Invert #2	Invert #3	Invert #4
CB-1	Type 'C' CB	144.80	139.80	141.80	-	-	-
CB-2	Type 'C' CB	144.00	139.00	141.00	141.00	-	-
CB-3	Yard Drain	147.00	144.00	144.00	-	-	-
CB-4	Type 'C' CB	148.81	141.30	146.00	143.30	143.30	-
CB-5	Type 'C' CB	147.50	140.25	142.25	142.25	-	-
CB-6	Type 'C' CB	144.50	139.50	141.00	141.50	-	-
CB-7	Type 'C' CB	152.00	146.25	149.00	148.25	148.25	-
CB-8	Type 'C' CB	151.93	145.54	147.54	147.54	-	-
CB-9	Type 'C' CB	153.20	148.26	150.26	-	-	-
CB-10	Type 'C' CB	152.10	146.50	148.50	148.90	148.5	-
CB-11	Type 'C' CB	151.90	146.90	148.90	-	-	-
CB-12	Type 'C' CB	152.20	147.20	149.20	-	-	-
CB-13	Type 'C' CB	153.53	148.53	150.53	-	-	-
CB-14	Type 'C' CB	151.90	146.58	148.58	148.58	148.85	-
CB-15	Type 'C' CB	152.80	147.80	149.80	149.80	-	-
CB-16	Type 'C' CB	155.75	150.75	152.75	-	-	-
CB-17	Type 'C' CB	152.00	144.63	149.55	149.00	142.36	146.28
CB-18	Type 'C' CB	151.80	145.88	147.88	147.88	-	-
CB-19	Yard Drain	142	136.8	136.8 (Ex. 15" C.P.P.)			

Storm MH #	Rim	Sump	Invert #1	Invert #2	Invert #3	Invert #4	Type
1	144.64	137.9	140.61	141.47	137.9 (Ex. 15" RCP)		Convert existing CB to MH
2	151.77	147.9	147.9	147.9		-	New
3	139	126.56	126.56	126.56 (Ex. 15" CPP)	-	-	New Doghouse
4	138.91	125.74	125.74	125.74	-	-	New Doghouse
5	139.46	132.77	137.28	132.77			
6	138.06	132.57	132.57	132.57	-	-	New
7	133.9	124.69	129.39	124.69 (Ex. 15" RCP)	124.69 (Ex. 15" RCP)		New Doghouse
8	152.7	142.45	148.8	142.45	-	-	

GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

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www.stantec.com

REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS
NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
GRADING & DRAINAGE PLAN 01

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-106

DATE: 10 JANUARY 2020
JOB NUMBER: 15050

CB-20	Type	Rim	Sump	Invert #1	Invert #2	Invert #3	Invert #4
CB-21	Type 'C-L' CB	135.67	130.67	132.67	132.67	-	-
CB-22	Type 'C' CB	137	132	134	-	-	-
CB-23	Type 'C' CB	137.6	132.6	134.6	-	-	-
CB-24	Type 'C' CB	134.43	129.43	131.43	-	-	-
CB-25	Type 'C' CB	135.5	128.57	131.95	131.95	130.57	-
CB-26	Type 'C' CB	136.9	131.54	133.54	-	-	-
CB-27	Type 'C' CB	136.3	130.05	133.05	133.05	-	-
CB-28	Type 'C' CB	136.2	130.65	132.65	132.65	-	-
CB-29	Type 'C' CB	132.96	127.96	129.96	-	-	-
CB-30	Yard Drain	139.26	135.00	137.00	137.00	-	-

Storm MH #	Rim	Sump	Invert #1	Invert #2	Invert #3	Invert #4	Type
3	139.00	126.56	126.56	126.56 (Ex. 15" CPP)	-	-	New Doghouse
4	138.91	125.74	125.74	125.74	-	-	New Doghouse
5	139.46	132.77	136.43	132.77			New
6	138.00	132.59	132.59	134.21	133.89	-	New
7	133.90	124.69	129.39	124.69 (Ex. 15" RCP)	124.69 (Ex. 15" RCP)	-	New Doghouse
8	152.70	150.00	150.00	150.00	-	-	New
Ex. DMH7	137.06	124.9	124.90 (Ex. 18" CPP)	132.40 (Ex. 12" CPP)	129.92	133.30 Ex. 12" CPP	
Ex. DMH5	141.57	133.5	133.90 (Ex. 12" RCP)	133.90 (Ex. 15" RCP)	-	-	
Ex. DMH11	138.89	127.9	127.90 (Ex. 12" RCP)	127.90 (Ex. 15" RCP)	127.90 (Ex. 15" RCP)	136.60	

LEGEND

- UNDERGROUND RETENTION SYSTEM
- S — PROPOSED SANITARY SEWER
- SD — PROPOSED STORM SEWER
- UGE — PROPOSED UNDERGROUND ELECTRIC
- FP — PROPOSED FIRE PROTECTION
- GAS — PROPOSED GAS
- UGC — PROPOSED UNDERGROUND CABLE
- W — PROPOSED DOMESTIC WATER
- PROPOSED DOORWAY
- PROPOSED TREE
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD LIGHT
- PROPOSED DUMPSTERS
- CTE — CONNECT TO EXISTING
- VIF — VERIFY IN FIELD

MATCHLINE SEE SHEET 1

TW = 148.00
BW = 144.00

53 L.F. – 8" PVC ROOF DRAIN INV. 138.11

C.T.E. V.I.F.

16 L.F. – 8" PVC ROOF DRAIN INV. 137.27

39' L.F. – 24" HDPE

CB-30 TYPE 'C-L' CB

8' L.F. – 12" HDPE

MH-3 STORM MH (TYP.)

MH-4 NEW 'DOGHOUSE' MH ON EXISTING STORM SEWER EXISTING 24" INV. SE: 125.74 (VERIFY IN FIELD)

MH-5 STORM MH (TYP.) 7 L.F. – 8" PVC ROOF DRAIN INV. 136.55

INV. NW: 133.81 (NEW 8" PVC) INTO EXISTING MH.

LIMIT OF NEW PAVEMENT SAWCUT & MATCH FLUSH (TYP.)

169' L.F. – 12" HDPE

FFE = 141.67

12' L.F. – 12" HDPE

CB-21 TYPE 'C' CB

215' L.F. – 10" PVC ROOF DRAIN INV.: 138.8

FFE = 139.67

EXISTING STORM MH (TYP.) T.F.: 137.06 INV. NW: 129.92 (NEW 12" HDPE) INV. SE: 124.9 (EXISTING 18" RCP)

11' L.F. – 12" HDPE

MH-6 HYDRODYNAMIC SEPARATOR W/ MANHOLE TOP

CB-22 TYPE 'C' CB

CB-23 TYPE 'C' CB

9' L.F. – 12" HDPE

UNDERGROUND RETENTION SYSTEM 1 CHAMBER INV. = 132.5 ROCK INV. = 132.0 NUMBER OF CHAMBERS = 264

INV. IN: 132.50

46' TEMPORARY 8" PVC ROOF DRAIN

FFE = 153.00

51' L.F. – 8" PVC ROOF DRAIN INV.: 150.50

CB-24 TYPE 'C' CB

4" PERFORATED UNDERDRAIN AROUND PERIMETER OF SYSTEM. INV. = 132.0 CONNECT TO DOWNSTREAM SIDE OF O.C.S #1

CB-26 TYPE 'C' CB

49' L.F. – 15" HDPE

40' L.F. – 15" HDPE

MH-7 NEW 'DOGHOUSE' MH ON EXISTING STORM SEWER (VERIFY EXISTING INVERTS IN FIELD)

CB-27 TYPE 'C' CB

INV. OUT = 132.50

5' L.F. – 15" HDPE

40' L.F. – 15" HDPE

INV. IN: 132.50

15' L.F. – 15" HDPE

CB-28 HYDRODYNAMIC SEPARATOR W/ TYPE 'C' CB

OUTLET CONTROL STRUCTURE 1 T.F.: 136.27 WEIR: 134.02 INV. NW: 132.50 INV. NE: 127.21 (EXISTING 15")

57 L.F. –15" HDPE

CB-29 TYPE 'C' CB

GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

CERTIFICATION:

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REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
GRADING & DRAINAGE PLAN 02

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-107

DATE:	JOB NUMBER:
10 JANUARY 2020	15050

PROPOSED NEW UNDERGROUND COMMUNICATIONS SERVICE (SEE ELEC. DWGS.)

8" DUCTILE IRON FIRE LOOP

THRUST BLOCKS (TYP.)

SANITARY MH (TYP.)
T.F.: 151.25
INV. SW: 147.0
INV. SE: 147.0
(11 / C-301)

TAP INTO EXISTING MAIN
(COORDINATE W/ UTILITY CO.)

4" DUCTILE IRON
WATER SERVICE

8" DUCTILE IRON
FIRE SERVICE

REMOVE WATER VALVES AND ASSOCIATED PIPING

RELOCATE PROPANE TANK
(SEE MECH. DRAWINGS)

RELOCATE HYDRANT
(SEE NOTE 18)

SANITARY MH (TYP.)
T.F.: 145.32
INV. NW: 141.32
INV. SE: 141.32
(11 / C-301)

FFE = 148.67

FFE = 148.00

262 L.F. – 8" PVC

FFE = 148.67

CONNECT TO
EXISTING 8" D.I.

SANITARY MH (TYP.)
T.F.: 152.54
INV. NW: 148.46
INV. SE: 148.46
(11 / C-301)

SANITARY CLEANOUT

55 L.F. – 6" PVC
SANITARY LATERAL (TYP.)
INV.: 149.25

FFE = 153.00

REMOVE EXISTING WATER LINE TO
PROPOSED CONNECTION POINTS

RELOCATE HYDRANT
(SEE NOTE 18)

FFE = 153.00

THRUST BLOCKS (TYP.)

CONNECT TO
EXISTING 8" D.I.

FFE = 153.00

24 L.F. – 6" PVC
INV.: 149.54

SANITARY MH (TYP.)
T.F.: 152.00
INV. NE: 149.00
INV. SE: 138.18

153 L.F. – 8" PVC

6" GAS METER (SEE MECH. DWGS)

52 L.F. – 6" PVC

11 L.F. – 6" PVC
INV.: 137.07

INV.: 137.05

4" GAS SERVICE LINE

6" PVC SANITARY
LATERAL (TYP.)
INV.: 137.47

32 L.F. – 6" PVC

GREASE TRAP
(4 / C-301)
INV. 137.16
SIZE: 6,000 GAL
VENT PIPE TO BUILDING
(SEE MECHANICAL PLANS)

RELOCATE HYDRANT
(SEE NOTE 18)

RESET WATER VAVLES

NEW 6" GAS SERVICE LINE

RESET VALVES (TYP.)

GAS SERVICE CONNECTION
COORDINATE W/ UTILITY CO.

MATCHLINE SEE SHEET 2

BUS DROP-OFF

BUS DROP-OFF

LEGEND

- UNDERGROUND RETENTION SYSTEM
- S — PROPOSED SANITARY SEWER
- SD — PROPOSED STORM SEWER
- UGE — PROPOSED UNDERGROUND ELECTRIC
- FP — PROPOSED FIRE PROTECTION
- GAS — PROPOSED GAS
- UGC — PROPOSED UNDERGROUND CABLE
- W — PROPOSED DOMESTIC WATER
- PROPOSED DOORWAY
- PROPOSED TREE
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD LIGHT
- PROPOSED DUMPSTERS

GENERAL NOTES:

1. ALL UNDERGROUND UTILITY INFORMATION AS SHOWN ON THESE PLANS SHALL BE CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION. THE CONTRACTOR SHALL CALL 1–800–922–4455 "CALL BEFORE YOU DIG" TWO DAYS PRIOR TO BEGINNING ANY EXCAVATION AT THE SITE.

2. PROTECT EXISTING UTILITIES FROM DAMAGE. ACTIVE UTILITY LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL SUBSURFACE UTILITIES PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL USE CARE DURING CONSTRUCTION TO AVOID DAMAGING ANY UTILITIES AND STRUCTURES NOT SCHEDULED FOR REMOVAL . THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: EXISTING ELECTRICAL, CABLE, TELEPHONE, SEWER AND WATER LINES, DRAINAGE STRUCTURES, VALVES, SITE FURNISHINGS, CURBS, PAVEMENT AND PLANTINGS. ANY DAMAGE RESULTING FROM THIS CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER OR TO THE UTILITY OWNER.

4. ABANDONED SURFACE AND SUBSURFACE UTILITIES I.E. WATER, ELECTRIC, TELEPHONE, GAS, STORM SEWER, SANITARY LINES, CONCRETE FOOTINGS AND FOUNDATIONS UNCOVERED DURING CONSTRUCTION SHALL BE REMOVED WHEN NECESSARY AND AS APPROVED BY THE ENGINEER TO PERMIT NEW CONSTRUCTION.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM AND COORDINATE WITH ALL UTILITY COMPANIES (WATER, SEWER, ELECTRICAL, ETC...) FOR CONNECTIONS AND OR RELOCATIONS TO EXISTING SERVICES.

6. TEST PIT MAY BE REQUIRED TO DETERMINE LOCATIONS OF EXISTING UTILITIES AND PRESENCE OF ANY UTILITIES NOT SHOWN OF SURVEY. CONTACT DESIGN ENGINEER IF UNFORESEEN OBSTRUCTIONS ARE ENCOUNTERED.

7. SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY PRIOR TO THE START OF GRADING AND MAINTAINED UNTIL ALL GROUND SURFACES ARE STABILIZED I.E. WITH TURF, PAVEMENTS, ETC.

8. SEE SITE LOGISTICS PLAN FOR ADDITIONAL INFORMATION REGARDING STAGING/STORAGE AREA AND LIMITS OF CONSTRUCTION FENCING, GATES, ETC.. ALL SITE ITEMS SUCH AS PAVEMENT, CURBS, TREES, UTILITIES, LAWN, ETC. OUTSIDE THE CONTRACT LIMIT LINE FOR THE BASE BID SHALL BE PROTECTED IN PLACE. ANY DAMAMGE TO EXISTING ITEMS NOT SCHEDULED TO BE DEMOLISHED/REMOVED SHALL BE REPAIRED IN KIND BY THE CONTRACTOR AT HIS EXPENSE.

9. ALL EXISTING UTILIITIES (STRUCTURES AND PIPES) WITHIN THE LIMIT OF WORK SHALL BE ABANDONED UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. TOP 2' OF ALL DRAINAGE STRUCTURES SHALL BE REMOVED AND STRUCTURE SHALL BE FILLED WITH CRUSHED STONE. CAP/ABANDON UTILITY CONNECTIONS TO THE MAINS AT THE STREET IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS. UTILITIES CONFLICITNG WITH PROPSOED WORK SHALL BE REMOVED.

10. ALL DRAINAGE PIPES SHALL BE 12" HDPE UNLESS OTHERWISE NOTED.

12. NO SEDIMENT LADEN WATER SHALL BE SENT TO THE UNDERGROUND RETENTION SYSTEM. FLOWS SHALL BYPASS THE SYSTEMS UNTIL ALL AREAS CONTRIBUTING TO THE SYSTEMS ARE STABLIZED.

13. ACCESSIBLE ROUTES' SLOPES SHALL BE 1:20 (5%) OR LESS AND THE CROSS SLOPES SHALL NOT EXCEED 1:50 (2%). CHANGES IN LEVELS SHALL NOT BE GREATER THAN 1/2 INCH, AND SLOPES SHALL NOT BE GREATER THAN 1/20 UNLESS RAMPS OR LIFTS ARE PROVIDED.

14. STORMWATER: PROPOSED WORK SHALL BE IN ACCORDANCE WITH MS4 REQUIREMENTS. SITE WILL BE SUBJECTED TO PERIODIC INSPECTIONS DURING CONSTRUCTION.

15. WATER: ALL NEW OR MODIFIED CONNECTIONS REQUIRE A PERMIT APPLICATION AND POTENTIAL ASSOCIATED CONNECTION FEE. ALL NEW PIPING MUST BE PRESSURE TESTED AND DISINFECTED PER AWWA STANDARDS. BACKFLOW DEVICES SHALL BE INSTALLED AND INSPECTED PRIOR TO SERVICE BEING TURNED ON.

16. SEWER: ALL NEW OR PROPOSED/MODIFIED CONNECTIONS REQUIRE A PERMIT APPLICATION AND POTENTIAL CONNECTION FEE.

17. EROSION & SEDIMENT CONTROL: EROSION & SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED DURING CONSTRUCTION AND POST CONSTRUCTION UNIL THE SITE IS STABILIZED. ALL CATCH BASINS SHALL BE PROTECTED FROM EROSION & SEDIMENT DURING THAT TIME PERIOD.

18. HYDRANT RELOCATION SHALL INCLUDE ALL FITTINGS, PIPES, VALVES, ETC.

GRAPHIC SCALE
0' 30' 60' 90'
(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

CERTIFICATION:

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www.stantec.com

REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS
NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095–0090 MAG/N

DRAWING TITLE:
UTILITIES PLAN 01

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-108

DATE:	JOB NUMBER:
10 JANUARY 2020	15050

LEGEND

- UNDERGROUND RETENTION SYSTEM
- S — PROPOSED SANITARY SEWER
- SD — PROPOSED STORM SEWER
- UGE — PROPOSED UNDERGROUND ELECTRIC
- FP — PROPOSED FIRE PROTECTION
- GAS — PROPOSED GAS
- UGC — PROPOSED UNDERGROUND CABLE
- W — PROPOSED DOMESTIC WATER
- PROPOSED DOORWAY
- PROPOSED TREE
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD LIGHT
- PROPOSED DUMPSTERS
- CTE — CONNECT TO EXISTING
- VIF — VERIFY IN FIELD

MATCHLINE SEE SHEET 1

SANITARY DROP MH (TYP.)
T.F.=142.55
INV. NW: 138.55
INV. SW: 136.63

198 L.F. – 8" PVC

58' L.F. – 8" PVC

82' L.F. – 8" PVC

47' L.F. – 8" PVC

FFE = 147.92

SANITARY CLEANOUT

21 L.F. –6" PVC
SANITARY LATERAL (TYP.)
INV.: 135.97

SANITARY MH (TYP.)
T.F.=138.4
INV. NE: 133.19
INV. S: 133.19

NEW 'DOGHOUSE' MH ON
EXISTING SANITARY SEWER
T.F.: 138.90
INV. NW: 132.79
EXISTING INV. SE: 132.79
(VERIFY IN FIELD)

4" NATURAL GAS

UGE TO ELECTRIC ROOM #3
(SEE ELECTRICAL DRAWINGS)

79 L.F. – 6" PVC
SANITARY (TYP.)
INV.: 137.00

INV. NW: 133.81
(NEW 8" PVC) INTO
EXISTING MH.

FFE = 141.67

MECHANICAL WATER LINES

SANITARY CLEANOUT

FFE = 139.67

123' L.F. – 6" PVC SANITARY LATERAL (TYP.)
INV.: 137.56

FFE = 141.67

70' L.F. – 4" PVC SANITARY LATERAL (TYP.)
INV.: 131.00

3" NATURAL GAS
INV. SW = 135.29

TEMPORARY BOILER

PARENT
DROP-OFF

CHILLER LINES (SEE MECHANICAL LINES)

SANITARY DROP MH (TYP)
TF = 140.00
INV. N: 134.26
INV. W: 138.27
INV. SW =130.63
INV. NE =130.63

GENERATOR
PAD/PLATFORM
(SEE MECH. DWGS.)

UGE TO ELECTRIC ROOM #2
(SEE ELECTRICAL DRAWINGS)

40' L.F. – 4" PVC
SANITARY LATERAL (TYP.)
INV. IN: 138.67

118' L.F. – 8" PVC

NEW 'DOGHOUSE' MH ON
EXISTING SANITARY SEWER
T.F.: 127.0
INV. NW: 123.0
EXISTING INV. SE: 119.60
(VERIFY IN FIELD)

FFE = 153.00

104' L.F. – 6" PVC

SANITARY DROP MH (TYP.)
T.F.: 132.80
INV. W: 126.91
INV. SE: 124.10

CHILLERS (2) (TYP.)
(SEE MECHANICAL DRAWINGS)

TRANSFORMER

82' L.F. – 8" PVC

123' L.F. – 6" PVC

SANITARY DROP MH (TYP.)
T.F.: 144.50
INV. NW: 136.16
INV. NE: 129.63
SE: 129.63

SANITARY MH (TYP.)
T.F.: 133.92
INV. E: 127.73
INV. NW: 127.73

190' L.F. – 8" PVC

RELOCATE ELECTRICAL AND
TELECOM LINES

PROPOSED NEW UNDERGROUND
PRIMARY DUCTBANK
(SEE ELECTRICAL DRAWINGS)

GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

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REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

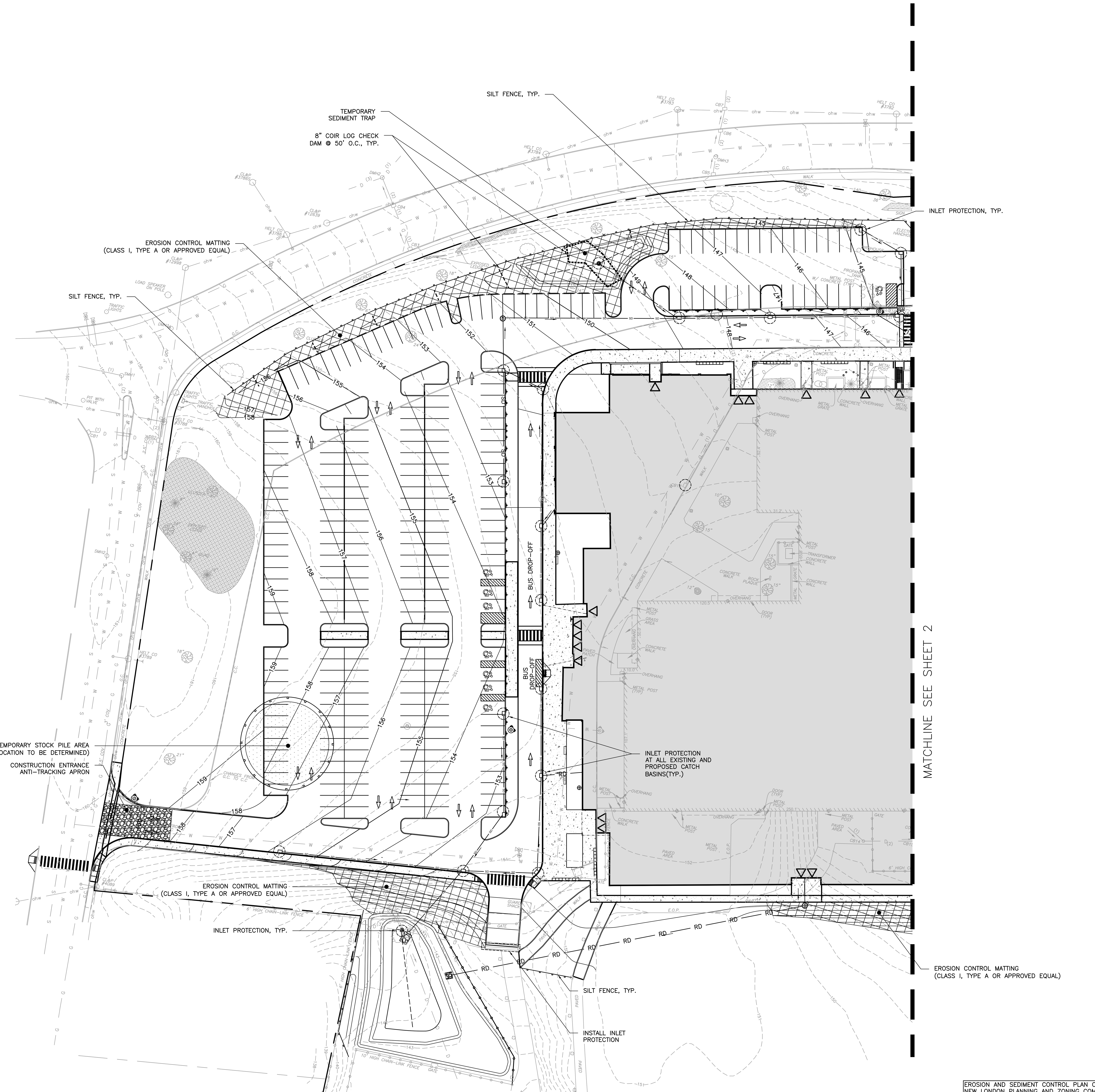
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
UTILITIES PLAN 02

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-109

DATE:	JOB NUMBER:
10 JANUARY 2020	15050



LEGEND

- BUILDING SETBACK LINE
- CONSTRUCTION FENCE
- SILT FENCE
- INLET PROTECTION
- ANT-TRACKING PAD
- EROSION CONTROL MATTING

NOTE:
EROSION CONTROL MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS.
SEE PHASING/SITE LOGISTICS PLANS FOR ADDITIONAL INFORMATION.
REFER TO SWPPP AND PERMIT FOR ADDITIONAL REQUIREMENTS.

EROSION AND SEDIMENT CONTROL PLAN CERTIFIED BY VOTE OF THE NEW LONDON PLANNING AND ZONING COMMISSION ON ___________.

CHAIRMAN OR SECRETARY OF THE COMMISSION

GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

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ARCHITECTURE & INTERIORS

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CERTIFICATION:

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REVISIONS:

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ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

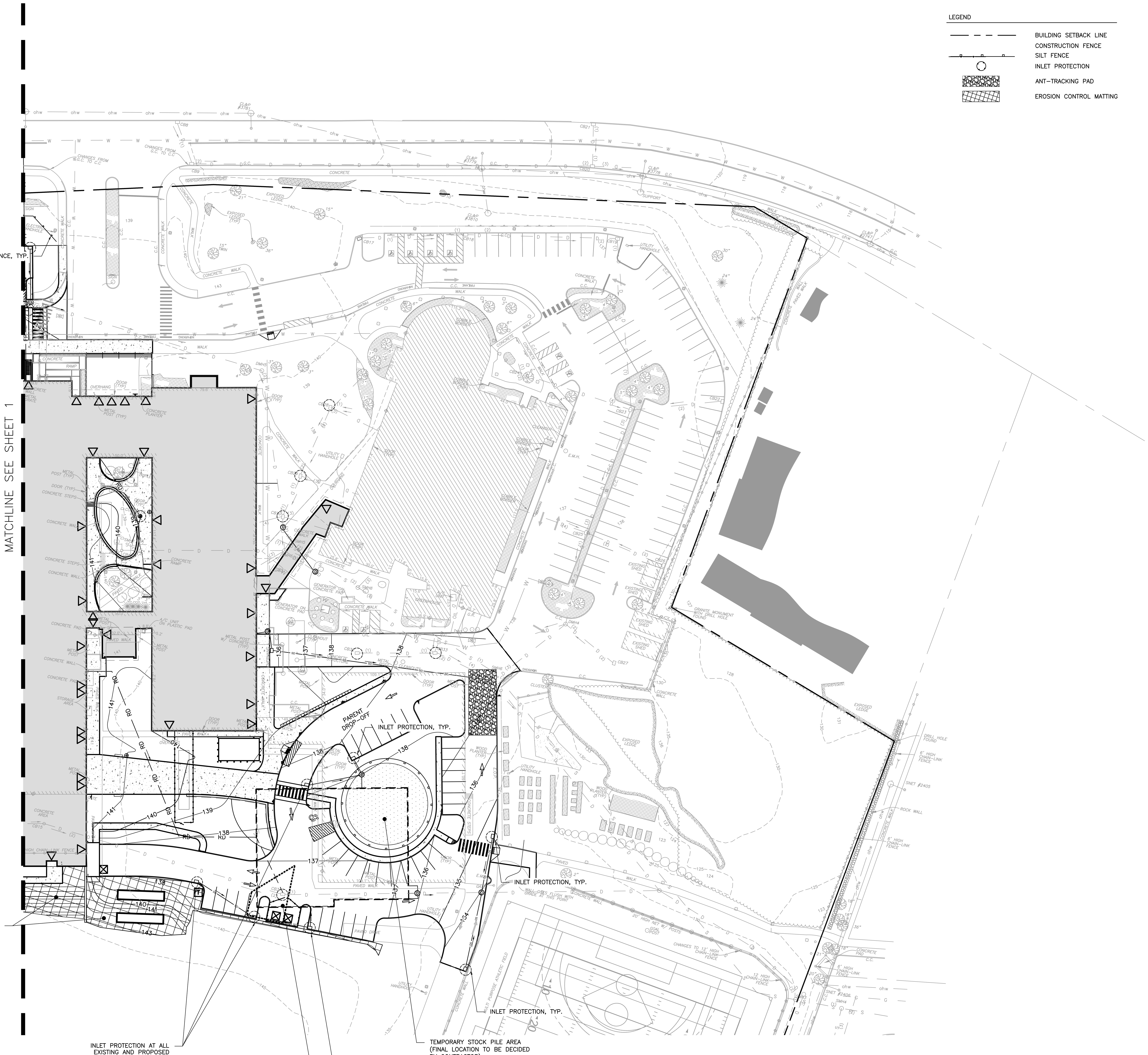
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
SEDIMENT & EROSION CONTROL PLAN 01

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-110

DATE:	JOB NUMBER:
10 JANUARY 2020	15050



LEGEND

- BUILDING SETBACK LINE
- CONSTRUCTION FENCE
- SILT FENCE
- INLET PROTECTION
- ANT-TRACKING PAD
- EROSION CONTROL MATTING

NOTE:
EROSION CONTROL MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS.
SEE PHASING/SITE LOGISTICS PLANS FOR ADDITIONAL INFORMATION.

EROSION AND SEDIMENT CONTROL PLAN CERTIFIED BY VOTE OF THE NEW LONDON PLANNING AND ZONING COMMISSION ON ____________

CHAIRMAN OR SECRETARY OF THE COMMISSION

GRAPHIC SCALE
0' 30' 60' 90'
(IN FEET)
1 inch = 30 ft.

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www.antinozzi.com

CERTIFICATION:

STATE OF CONNECTICUT ANTONIO DI CAMILLO No. PEN.0025600 LICENSED PROFESSIONAL ENGINEER

CONSULTANT:

Stantec

Stantec Consulting Services Inc.
55 Church Street, Suite 601
New Haven, CT
06510
Tel. 203.495.1645
Fax. 203.495.1652
www.stantec.com

REVISIONS:

#	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

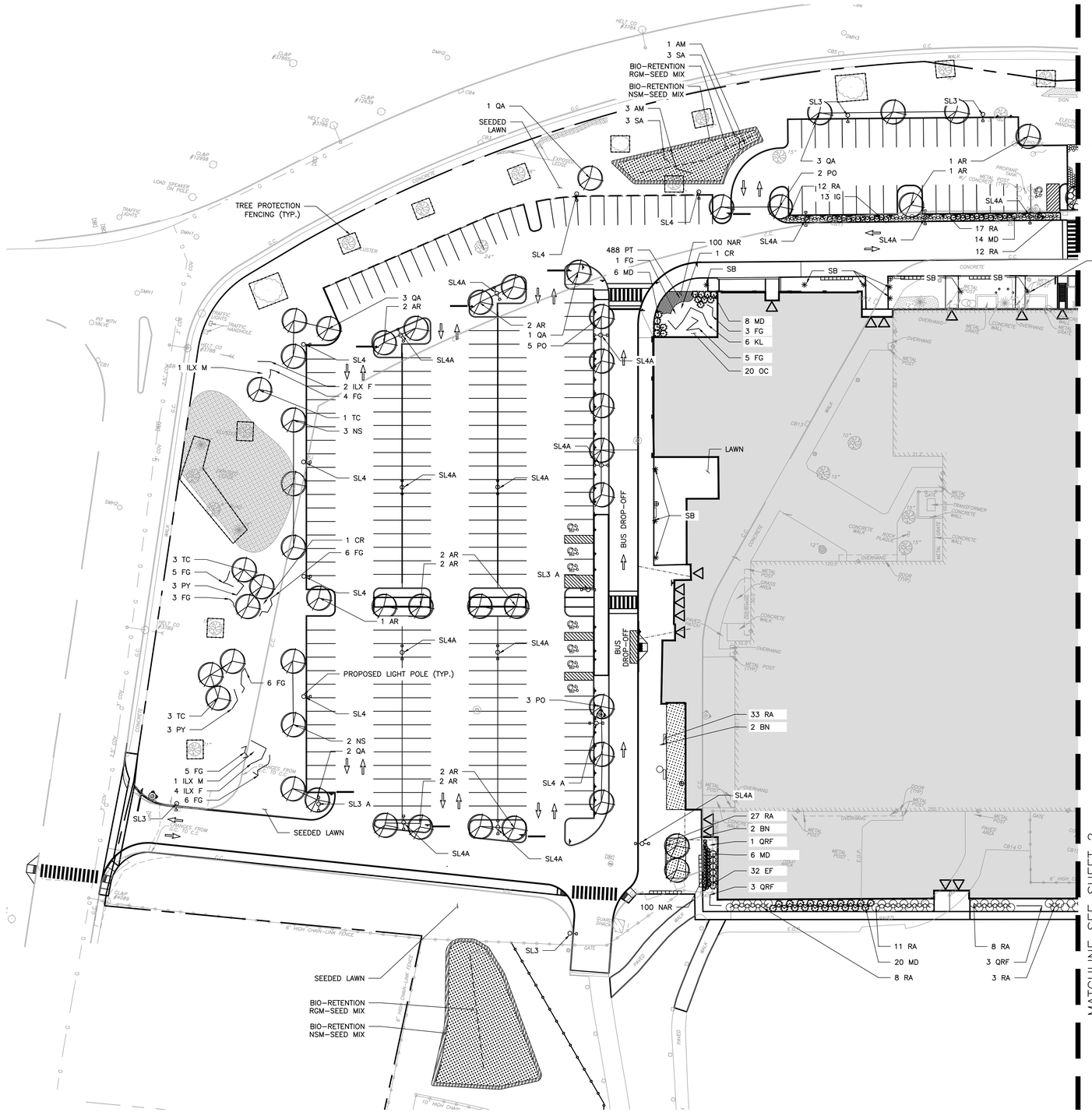
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
SEDIMENT & EROSION CONTROL PLAN 02

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-111

DATE:	JOB NUMBER:
10 JANUARY 2020	15050



LEGEND

- PROPOSED DOORWAY
- PROPOSED TREE
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD LIGHT
- PROPOSED DUMPSTERS
- PROPOSED UTILITIES (CHILLERS)
- BIKE RACKS
- LITTER RECEPTACLES
- BENCHES

PLANTING LEGEND

- SHADE TREES
- ORNAMENTAL TREES
- EVERGREEN TREES
- SHRUBS
- BIO-RETENTION SEED MIX
- GROUNDCOVER

SITE LIGHTING SCHEDULE

SYMBOL	QTY.	LABEL	HEIGHT	ARRANGEMENT	LUM. LUMENS	LUM. WATTS	LLF	DESCRIPTION
▫-○	13	SL3	20'	SINGLE	5459	71.99	0.900	HESSAMERICA LN450-2LV-NW-T3-UNV-A-2OSR-S-XX-N
○-▫-○	12	SL3A	20'	BACK-BACK	5459	71.99	0.900	HESSAMERICA LN450-2LV-NW-T3-UNV-B-2OSR-S-XX-N
▫-○	14	SL4	20'	SINGLE	4941	72	0.900	HESSAMERICA LN450-2LV-NW-T4-UNV-A-2OSR-S-XX-N
○-▫-○	15	SL4A	20'	BACK-BACK	4941	72	0.900	HESSAMERICA LN450-2LV-NW-T4-UNV-B-2OSR-S-XX-N
✳	20	SB	3'	SINGLE	659	16	0.900	HESSAMERICA LN950-LED-NW-UNV-D-03SRA-XX-N

PLANTING SCHEDULE: BIO-RETENTION AREAS

KEY	QTY.	BOTANICAL NAME	COMMON NAME	CAL/HT.	SIZE	SPACING
RAIN GARDEN SHRUBS						
AM	4	ARONIA MELANOCARPA	BLACK CHOKEBERRY	#4	CONT.	SEE PLAN
SA	6	SPIREA ALBA	NARROW-LEAVED MEADOWSWEET	#4	CONT.	SEE PLAN
RAIN GARDEN SEED MIX						
RGM	15,262 SF	RAIN GARDEN MIX: ERNMX-180	ERNST SEEDS OR APPROVED EQUAL	SEED PER POUND		
NATURALIZED SLOPE GRASS SEED MIX						
NSM	75LB PER ACRE	NATIVE STEEP SLOPE MIX: ERNMX-181-2	ERNST SEEDS OR APPROVED EQUAL	SEED PER POUND		

PLANTING SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	CAL/HT.	SIZE	SPACING
TREES						
AR	18	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	4-4 1/2" CAL.	B&B	SEE PLAN
BN	5	BETULA NIGRA	RIVER BIRCH (MULTI-STEM)	4-4 1/2" CAL.	B&B	SEE PLAN
PO	10	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	4-4 1/2" CAL.	B&B	SEE PLAN
QA	13	QUERCUS ALBA	WHITE OAK	4-4 1/2" CAL.	B&B	SEE PLAN
TC	15	TILIA CORDATA	LITTLELEAF LINDEN	4-4 1/2" CAL.	B&B	SEE PLAN
NS	5	NYSSA SYLVATICA	BLACK TUPELO	4-4 1/2" CAL.	B&B	SEE PLAN
ORNAMENTAL TREES						
CR	5	CORNUS X RUTGAN	STELLAR PINK RUTGERS DOGWOOD	3-3 1/2" CAL.	B&B	SEE PLAN
QRF	7	QUERCUS ROBUR 'FASTIGIATA'	COLUMNAR ENGLISH OAK	3-3 1/2" CAL.	B&B	SEE PLAN
PY	13	PRUNUS X YEDOENSIS	YOSHINO CHERRY	3-3 1/2" CAL.	B&B	SEE PLAN
EVERGREEN TREES						
ILX F	6	ILEX OPACA 'FEMALE'	AMERICAN HOLLY	3-3 1/2" CAL.	B&B	SEE PLAN
ILX M	2	ILEX OPACA 'MALE'	AMERICAN HOLLY	3-3 1/2" CAL.	B&B	SEE PLAN
PS	7	PINUS STROBUS	EASTERN WHITE PINE	7' MIN. HEIGHT	B&B	SEE PLAN
TO	6	THUJA OCCIDENTALIS 'NIGRA'	DARK AMERICAN ARBORVITAE	7' MIN. HEIGHT	B&B	SEE PLAN
SHRUBS						
EF	32	EUONYMUS FORTUNEI 'EMERALD CHARM'	EMERALD CHARM EUONYMUS	#3	CONT.	24" O.C.
FG	79	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	#5	CONT.	3' O.C.
IG	13	ILEX GLABRA 'COMPACTA'	INKBERRY	#4	CONT.	3.5' O.C.
KL	6	KALMIA LATIFOLIA	MOUNTAIN LAUREL	#5	CONT.	7.5' O.C.
MD	88	MICROBIOTA DECUSSATA	RUSSIAN ARBORVITAE	#4	CONT.	4' O.C.
PV	97	PANICUM VIRGATUM 'HEAVY METAL'	SWITCH GRASS	#4	CONT.	24" O.C.
RA	137	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC	#4	CONT.	4' O.C.
GROUNDCOVER/SEED MIX						
NAR	200	NARCISSUS	DAFFODILS	BULBS	BAG	GROUPS OF 4
PT	2145	PACHYSANDRA TERMINALIS	JAPANESE PACHYSANDRA	PLUGS	TRAY	8" O.C.
POV	1078	POLYGONATUM ODORATUM 'VARIEGATUM'	SOLOMON'S SEAL	#2	TRAY	8" O.C.
OC	276	OSMUNDASTRUM CINNAMOMEUM	CINNAMON FERN	#2	CONT.	18" O.C.
LAWN	–	SEEDED LAWN MIX	SUN + SHADE LAWN MIX	SEED PER POUND		

GRAPHIC SCALE

0' 30' 60' 90'

(IN FEET)
1 inch = 30 ft.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

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NEW LONDON HIGH SCHOOL

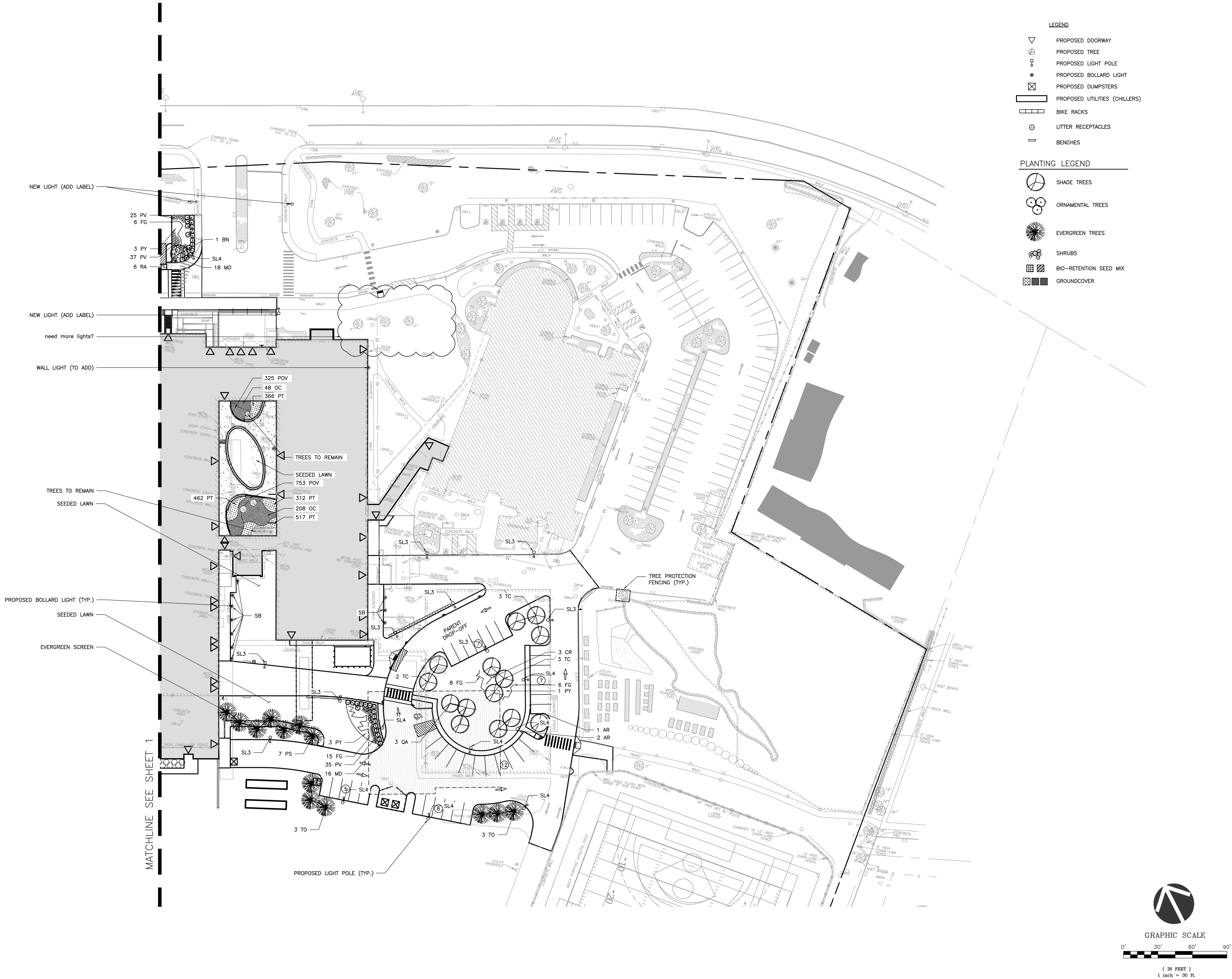
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
Planting & Lighting Plan 01

SCALE: 1" = 30'
DRAWN BY: ---
REVIEWED BY: ---

DRAWING NO.
C-112

DATE: 10 JANUARY 2020
JOB NUMBER: 15050



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CERTIFICATION:

CONSULTANT:

Stantec

REVISIONS:

DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
Planting & Lighting Plan 02

SCALE:	DRAWN BY:	REVIEWED BY:
1"=30'	---	---

DRAWING NO.
C-113

DATE:	JOB NUMBER:
10 JANUARY 2020	15050

PROJECT DESCRIPTION:

THE PROJECT CONSISTS OF THE CONSTRUCTION, RENOVATION AND ADDITION TO NEW LONDON HIGH SCHOOL IN NEW LONDON, CONNECTICUT.

THE INTENT OF THE SEDIMENT AND EROSION CONTROL PLAN IS TO COLLECT SEDIMENT IN RUNOFF DURING CUTTING AND FILLING OPERATIONS BEFORE CONSTRUCTION AREAS ARE STABILIZED. SEDIMENT AND EROSION CONTROL MEASURES AS DESCRIBED HEREIN SHALL BE INSTALLED WHERE SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER OR STATE INSPECTOR. EXISTING DRAINAGE CHANNELS AND STORM DRAINAGE STRUCTURES WILL BE MAINTAINED AND PROTECTED DURING CONSTRUCTION UNTIL NEW DRAINAGE APPURTENANCES, WHERE PROPOSED, ARE OPERATIONAL AND ACCEPTED/APPROVED BY DPU ENGINEERS.

CONSTRUCTION SEQUENCE: THE GENERAL SEQUENCE OF CONSTRUCTION SHALL PROCEED AS FOLLOWS:

- INSTALLATION OF PERIMETER EROSION/SILTATION CONTROL MEASURES, ANTI–TRACKING PAD, AND FENCE OFF AREAS LIMITED TO HEAVY EQUIPMENT. INLET PROTECTION SHALL BE INSTALLED IN EXISTING CATCHBASINS.
- DEMOLISH/REMOVE EXISTING PAVEMENT, SLABS, UTILITIES AS NOTED ON PLANS. ALL MATERIALS ,INCLUDING ASPHALT, CONCRETE, ETC., SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
- ESTABLISH ROUGH SUBGRADES FOR ROADWAYS, PARKING AND BUILDING PLATFORMS
- SITE STORMWATER RUNOFF FROM DISTURBED AREAS TO BE DIRECTED VIA TEMPORARY SWALES OR DIVERSION DIKES TO SEDIMENT BASINS AS NECESSARY. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR AS CONSTRUCTION DICTATES.
- DISCHARGES FROM DEWATERING OF EXCAVATION SHALL NOT BE DIVERTED DIRECTLY INTO ANY EXISTING STORM DRAINS WITHOUT PRETREATMENT VIA SEDIMENT BASIN OR TEMPORARY SEDIMENT CONTROL POOL
- MAINTAIN ANTI–TRACKING PAD AND INSPECT EROSION CONTROL MEASURES.
- STABILIZE ALL CUT OR DISTURBED AREAS WITH TOPSOIL, SEED AND MULCH.
- REMOVAL OF EXISTING DRAINAGE SYSTEM
- EXCAVATION AND INSTALLATION OF DRAINAGE SYSTEM AND UTILITY CONDUITS
- INSTALLATION OF INTERNAL EROSION CONTROLS AS AREAS ONSITE ARE STABLIZED AND CONSTRUCTION PROGRESSES
- INSTALL REMAINING UTILITIES
- PERFORM BUILDING CONSTRUCTION
- CONSTRUCT ROADWAYS AND PARKING AREAS
- TOPSOIL AND FINAL SEEDING OF ALL DISTURBED AREAS AND OTHER AREAS WITHIN SITE AS DIRECTED BY OWNER'S REPRESENTATIVE
- INSTALLATION OF LIGHTING AND LANDSCAPING
- INSPECT AND CLEAN DRAINAGE SYSTEM
- REMOVAL OF PERIMETER EROSION CONTROL MEASURES
- FINAL CLEAN–UP

SEDIMENTATION AND EROSION CONTROL NOTES:

1. SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY PRIOR TO THE START OF GRADING AND MAINTAINED UNTIL ALL GROUND SURFACES ARE STABILIZED I.E. WITH TURF, PAVEMENT, ETC., AND SHALL CONSIST OF SILT FENCING, HAY BALES, TEMPORARY SEDIMENTATION BASINS AND SWALES, MULCH AND TEMPORARY SEEDING.

2. THE OWNER HAS THE AUTHORITY TO CONTROL THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION OPERATIONS AND TO DIRECT THE CONTRACTOR TO IMMEDIATELY PROVIDE PERMANENT OR TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS, WATERCOURSES, LAKES, PONDS, OR OTHER AREAS OF WATER IMPOUNDMENT BY CONSTRUCTION OPERATIONS. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO PREVENT EROSION ON THE SITE AND/OR ONTO ABUTTING PROPERTY.

3. THE ENGINEER HAS THE AUTHORITY TO DIRECT THE CONTRACTOR TO DIVERT SURFACE WATER RUN–OFF AWAY FROM EXPOSED RAW EARTH SURFACES THROUGH THE USE OF TEMPORARY BERMS, DIKES, DIVERSION CHANNELS AND/OR OTHER DIVERSION TECHNIQUES APPROVED BY THE CITY'S REPRESENTATIVE AND THE ENGINEER.

4. THE EROSION CONTROL FEATURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR AND SHALL BE CHECKED DAILY AND AFTER EACH SEVERE RAIN STORM OF 0.5" OR GREATER FOR DAMAGE, UNTIL SUCH FEATURES ARE, IN THE OPINION OF THE ENGINEER, NO LONGER NEEDED. ALL SEDIMENTATION TRAPS AND SEDIMENTATION BASINS SHALL HAVE THE ACCUMULATED SEDIMENT AND/OR CLEAN WATER REMOVED BEFORE IT SIGNIFICANTLY REDUCES THEIR STORAGE VOLUME OR FUNCTION, PRIOR TO THE NEXT RAIN STORM FORECAST FOR THE REGION.

5. THE CONTRACTOR SHALL, AT ALL TIMES, HAVE ON HAND THE NECESSARY MATERIALS AND EQUIPMENT TO PROVIDE FOR EARLY SLOPE STABILIZATION AND CORRECTIVE MEASURES TO DAMAGED SLOPES. THE CONTRACTOR SHALL RESPOND TO MAINTENANCE OR ADDITIONAL MEASURES ORDERED BY THE ENGINEER WITHIN 24 HOURS.

6. THE CONTRACTOR SHALL OPERATE ALL EQUIPMENT AND PERFORM ALL CONSTRUCTION OPERATIONS SO AS TO MINIMIZE POLLUTION TO ADJACENT WATER COURSES OR WETLANDS AREAS. THE CONTRACTOR SHALL CEASE ANY OF HIS OPERATIONS WHICH WILL INCREASE POLLUTION DURING RAIN STORMS.

7. ALL SLOPES OF STOCKPILE MATERIAL AND OTHER DISTURBED AREAS SHALL BE STABILIZED AND PROTECTED BY SURROUNDING WITH SILT FENCING OR HAY BALES, OR OTHERWISE PROTECTED AS APPROVED BY THE ENGINEER OR AS DIRECTED BY ZO OR PZC DESIGNEE. ALL DAMAGED AREAS SHALL BE REPAIRED AS SOON AS POSSIBLE. THE ENGINEER SHALL LIMIT THE SURFACE AREA OF EACH MATERIAL EXPOSED IF THE CONTRACTOR FAILS TO SUFFICIENTLY PROTECT THE SLOPES TO PREVENT POLLUTION.

8. MULCHES: SHALL BE HAY, STRAW, WOOD CELLULOSE, WOOD CHIPS, STONE, NETTING, BURLAP OR OTHER SUITABLE MULCH MATERIAL AS APPROVED BY THE ENGINEER. MULCHES SHALL BE REASONABLY CLEAN AND FREE OF NOXIOUS WEEDS AND DELETERIOUS MATERIALS. ASPHALT SPRAYS WILL NOT BE ALLOWED. THE CONTRACTOR SHALL PREVENT STRAW, WOOD CHIPS, ETC., FROM ENTERING ANY CATCH BASINS, RESERVOIRS OR WATERCOURSES.

9. HAY BALES: SHALL BE PLACED AROUND ALL EXISTING DRAINAGE INLETS OR AS DIRECTED BY THE ENGINEER. THEY SHALL BE HELD IN PLACE BY TWO WOODEN STAKES IN EACH BALE. BALES SHALL BE MAINTAINED OR REPLACED AS ORDERED BY THE ENGINEER UNTIL THEY ARE NO LONGER NECESSARY FOR THE PURPOSE INTENDED OR ARE ORDERED REMOVED BY THE ENGINEER. HAY BALES SHALL BE MADE OF HAY WITH 40 POUNDS MINIMUM WEIGHT AND 120 POUNDS MAXIMUM WEIGHT. WOOD STAKES SHALL BE A MINIMUM OF 1 INCH BY 1 INCH NOMINAL SIZE BY A MINIMUM OF 3 FEET LONG.

10. SILT FENCE: SHALL CONSIST OF 3–FOOT WIDE GEOSYNTHETIC FABRIC WITH PREFABRICATED WOOD POSTS AS MANUFACTURED BY "MIRAFI" OR EQUAL. THE BOTTOM SIX INCHES OF FABRIC SHALL BE BURIED BY EITHER TRENCHING OR BY LAYING THE SIX INCH SECTION HORIZONTALLY ON THE GROUND AND BURYING BY RAMPING THE TOPSOIL UP TO THE CONTROL FENCE.

- MINIMUM LENGTH OF SILT FENCE IS 15 L.F.
- MAXIMUM POST SPACING IS 10 L.F.
- JOINTS IN FILTER FABRIC SHALL BE ONLY AT SUPPORT POSTS WITH MINIMUM 6" OVERLAP, SECURELY SEALED
- SILT FENCE SHALL NOT BE USED IN A WATER COURSE
- FABRIC SUSCEPTIBLE TO SUNLIGHT DAMAGE SHALL NOT BE USED IN ANY INSTALLATIONS WHERE EXPOSURE TO LIGHT WILL EXCEED 30 DAYS, UNLESS SPECIFICALLY AUTHORIZED IN WRITING BY THE ENGINEER.

11. TEMPORARY SWALES AND SEDIMENTATION BASINS MAY BE CONSTRUCTED OF RIP–RAP, MULCH, HAY BALES OR JUTE MESH. PORTLAND CONCRETE OR BITUMINOUS CONCRETE WILL NOT BE ALLOWED.

12. TEMPORARY GRASS SEED SHALL BE PERENNIAL RYE–GRASS (LOLIUM PERENNE) OR AN IMPROVED VARIETY THEREOF, SUCH AS MANHATTAN, HAVING A MINIMUM PURITY OF 98 PERCENT AND A MINIMUM GERMINATION OF 90 PERCENT. THE SEEDING MAY BE ALTERED BY THE ENGINEER IF REQUESTED BY THE CONTRACTOR TO SUIT SPECIAL AREAS OR CONDITIONS.

13. AT THE COMPLETION OF THE PROJECT, AND AFTER ALL DISTURBED AREAS ARE STABILIZED, THE CONTRACTOR SHALL COMPLETELY REMOVE ALL SEDIMENTATION AND EROSION CONTROL MEASURES AFTER AUTHORIZATION OF PZC/ZO DESIGNEE. SILT FENCING SHALL BE CUT FLUSH WITH THE GROUND AND ANY ACCUMULATED SEDIMENTATION SHALL BE THINLY SPREAD UPON EXISTING GROUND COVER. ALL MULCH, HAY BALES AND RIP–RAP SHALL BE REMOVED FROM THE SITE, UNLESS SPECIFICALLY ORDERED BY THE ENGINEER TO REMAIN IN PLACE.

14. ADDITIONAL EROSION & SEDIMENT CONTROLS SHALL BE STORED ONSITE.

15. NOTIFY THE CITY'S INLAND WETLANDS OFFICIAL (C: 860–437–6381) IF SIGNIFICANT CHANGES TO THE EROSION CONTROLS ARE NEEDED WHICH MAY IMPACT NEARBY WETLANDS/WATERCOURSE.

GENERAL NOTES:

1. TOTAL SITE AREA ±47 AC., TOTAL DISTURBED AREA = 6.4 AC., TOTAL AREA TO BE VEGETATIVELY STABILIZED = 1.8 AC.

2. THE ANTICIPATED START OF CONSTRUCTION FOR THE PROJECT IS MAY 2020 AND THE APPROXIMATE PROJECT COMPLETION DATE IS NOVEMBER 2023.

3. THE FOLLOWING PERMITS ARE ANTICIPATED FOR THE PROJECT: PLANNING AND ZONING AND CT DEEP STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

4. REFER TO THE FOLLOWING DOCUMENTS FOR ADDITIONAL INFORMATION: GEOTECHNICAL INVESTIGATION REPORT, DRAINAGE STUDY, ENVIRONMENTAL REPORT.

5. CONTRACTOR SHALL ENSURE THAT ALL SEDIMENT AND EROSION CONTROL MEASURES AT THE SITE ARE MAINTAINED AND IN WORKING ORDER AT ALL TIMES BUT ESPECIALLY PRIOR TO A MAJOR STORM. A MAJOR STORM IS DEFINED AS A STORM PREDICTED BY THE NATIONAL OFFICE OF ATMOSPHERIC ADMINISTRATION (NOOA) WEATHER SERVICE WITH WARNINGS OF FLOODING, SEVERE THUNDERSTORMS OR SIMILARLY SEVERE WEATHER CONDITIONS OR EFFECTS.

6. ALL SEDIMENT AND EROSION CONTROL MEASURES TO BE USED AT THE SITE SHALL BE IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

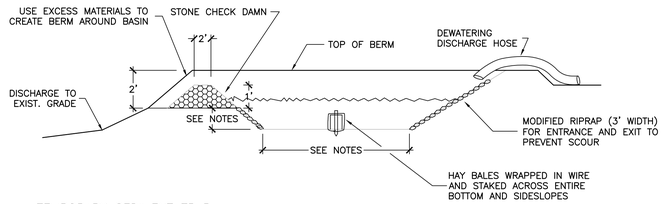
7. PERSON RESPONSIBLE FOR MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION SHALL BE: TBD.

8. REFER TO SWPPP FOR ADDITIONAL REQUIREMENTS.

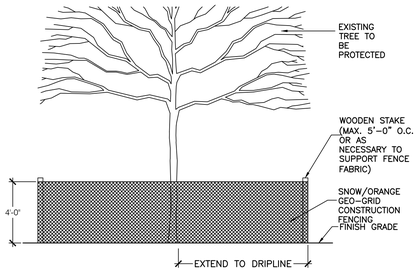
EROSION AND SEDIMENT CONTROL PLAN CERTIFIED BY VOTE OF THE NEW LONDON PLANNING AND ZONING COMMISSION ON _____.

_____
CHAIRMAN OR SECRETARY OF THE COMMISSION

NOTE:
1. CLEANOUT OF ACCUMULATED SEDIMENT SHALL BE ACCOMPLISHED WHEN ONE–HALF OF THE ORIGINAL HEIGHT OF THE SEDIMENTATION CONTROL SYSTEM, AS INSTALLED, BECOMES FILLED WITH SEDIMENT.
2. SEDIMENT TRAP TO BE USED AS CONDITIONS WARRANT OR AT THE DIRECTION OF THE ENGINEER. COST SHALL BE INCLUDED IN THE BASE BID PRICE. NO ADDITIONAL PAYMENT SHALL BE MADE.
3. DEWATERING FROM COFFERDAM INSTALLATION OR EXCAVATION SHALL PASS THROUGH A TEMPORARY SEDIMENT TRAP OR SEDIMENTATION ROLLOFF CONTAINER. SEDIMENT LADEN WATER SHALL NOT BE DISCHARGED DIRECTLY TO THE BROOK OR STORM SYSTEM.
4. DIMENSIONS/LOCATION AND REQUIREMENTS SHOWN ARE MINIMUMS AND SHALL BE MODIFIED AS SITE CONDITIONS DICTATE OR AS DIRECTED BY ENGINEER.
5. SIZING SHALL BE PER CT SEDIMENT AND EROSION CONTROL GUIDELINES. STORAGE SHALL BE 134 CY PER ACRE OF DISTURBED CONTRIBUTING AREA.
6. NO TURBID/SEDIMENT LADEN WATER SHALL BE ALLOWED TO DISCHARGE OFF THE SITE WITHOUT TREATMENT.



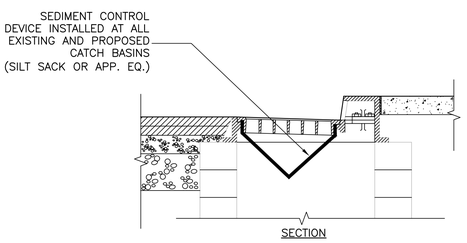
1 TEMPORARY SEDIMENT TRAP
SCALE: N.T.S.



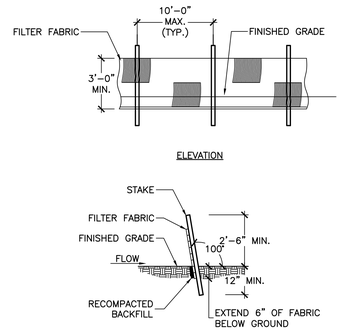
NOTES:
1. NO STOCKPILING OF MATERIALS OR EQUIPMENT IS PERMITTED WITHIN TREE PROTECTION FENCE.

2. EXTENT OF TREE PROTECTION FENCE SHALL BE TO DRIPLINE OF TREE WHERE POSSIBLE. FENCE MAY BE LOCATED A MIN. OF 8'–0" FROM TRUNK OF TREE WHERE APPROVED BY LANDSCAPE ARCHITECT.

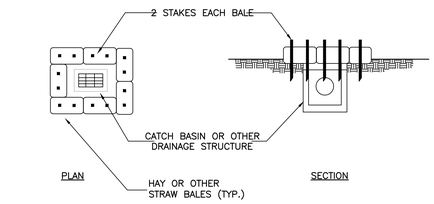
3 TREE PROTECTION FENCE
SCALE: NTS



5 S.E.C. AT CATCH BASINS
SCALE: NTS

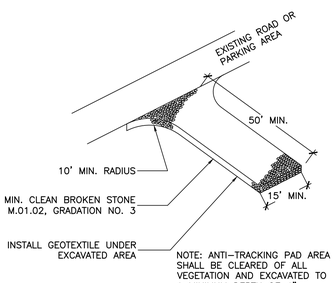


2 SILT FENCE DETAIL
SCALE: NTS



NOTE:
ALL EXISTING OR PROPOSED CATCH BASINS IN AREAS DISTURBED BY CONSTRUCTION SHALL BE PROTECTED BY SEDIMENTATION CONTROLS.

4 HAY BALE DETAIL– CATCH BASIN IN A DEPRESSION – TYPE 'C'
SCALE: NTS



6 ANTI–TRACKING PAD DETAIL
SCALE: NTS

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ARCHITECTURE & INTERIORS

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NEW LONDON HIGH SCHOOL

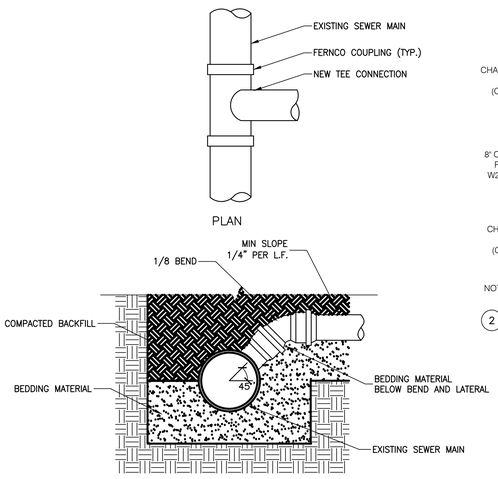
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095–0090 MAG/N

DRAWING TITLE:
SEDIMENT & EROSION CONTROL DETAILS

SCALE:	DRAWN BY:	REVIEWED BY:
AS NOTED	---	---

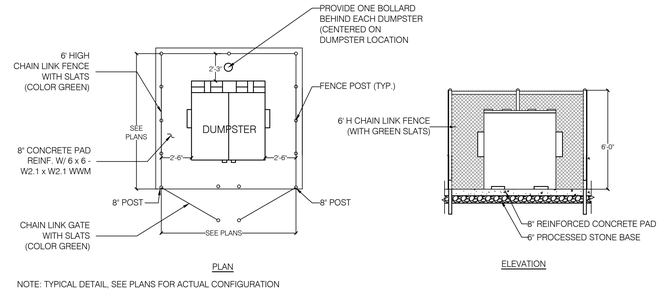
DRAWING NO.
C-300

DATE:	JOB NUMBER:
10 JANUARY 2020	15050



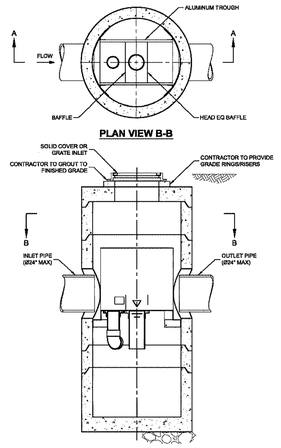
NOTE: DETAIL MAY NOT REFLECT FIELD CONDITIONS. ALL CONNECTIONS TO BE IN CONFORMANCE WITH TOWN REQUIREMENTS.

1 TYPICAL LATERAL CONNECTION
N.T.S



NOTE: TYPICAL DETAIL, SEE PLANS FOR ACTUAL CONFIGURATION

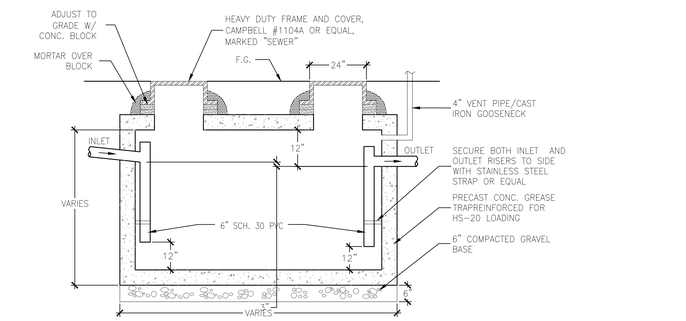
2 GARBAGE DUMPSTER & PAD
SCALE: N.T.S.



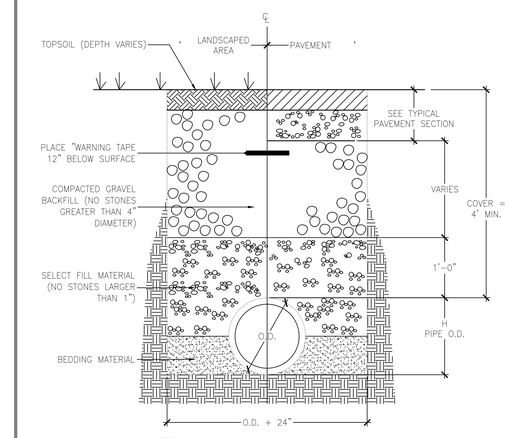
VORTSENTRY HS GENERAL INFORMATION														
Model	Manhole Diameter (ID)		Total Treatment Flow Rate		Typical Total Distance Rim to Outside Bottom A		Typical Distance Rim to Invert B		Typical Depth Below Invert (inside) C		Approximate Minimum Distance Rim to Invert		Maximum Pipe Diameter (ID)	
	FT	mm	CFS	L/S	FT	m	FT	m	FT	mm	FT	m	IN	mm
HS36	3	900	0.55	15.6	10.16	3.10	4.08	1.24	5.58	1702	3.00	0.91	18	450
HS48	4	1200	1.20	34.0	13.25	4.04	6.00	1.83	6.75	2057	4.00	1.22	24	600
HS60	5	1500	2.20	62.3	15.13	4.61	6.50	1.98	7.96	2426	4.62	1.47	30	750
HS72	6	1800	3.70	104.8	16.56	5.05	6.75	2.06	9.15	2788	5.59	1.70	36	900
HS84	7	2100	5.60	158.6	18.85	5.75	7.75	2.36	10.35	3156	5.00	1.52	42	1050
HS96	8	2400	8.10	229.4	20.87	6.36	8.50	2.59	11.54	3518	6.91	2.11	48	1200

NOTE: HYDRODYNAMIC SEPARATORS SHALL BE MODEL VORTSENTRY AS SHOWN ON THE PLANS WITH MINIMUM TREATED FLOW RATES AS SHOWN ON THE TABLE ABOVE FOR 80% TSS REMOVAL (240 MICRON PARTICLE SIZE) OR APPROVED EQUAL.

3 TYPICAL HYDRODYNAMIC SEPARATOR DETAIL
SCALE: NTS

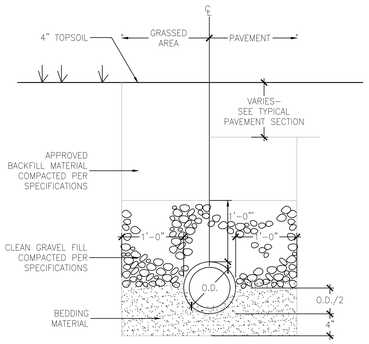


4 6,000 GAL. GREASE TRAP/OIL WATER SEPARATOR
N.T.S

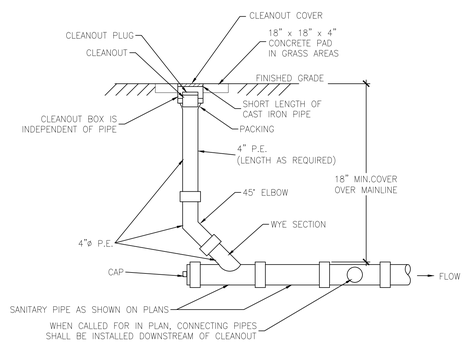


NOTES:
1. WATER MAIN INSTALLATION SHALL BE IN ACCORDANCE WITH WATER COMPANY SPECIFICATIONS.

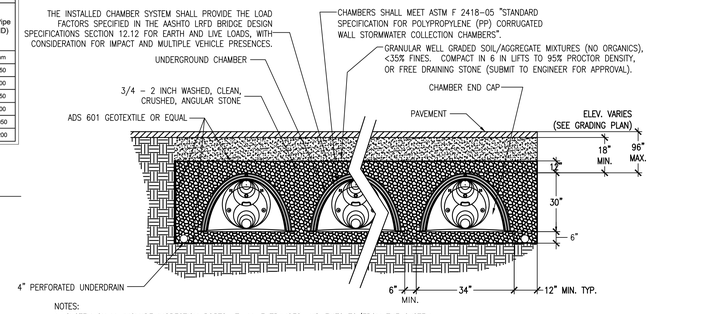
5 TYPICAL WATER MAIN TRENCH SECTION
SCALE: N.T.S.



6 TYPICAL STORM/SANITARY TRENCH SECTION
SCALE: 1" = 1'-0"

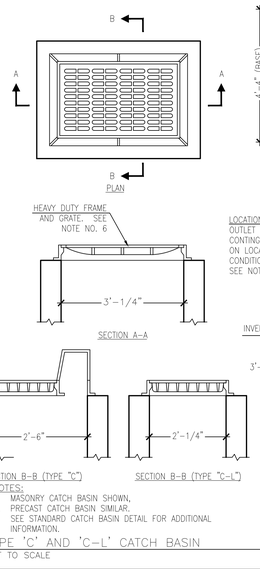


7 TYPICAL CLEANOUT
SCALE: NTS

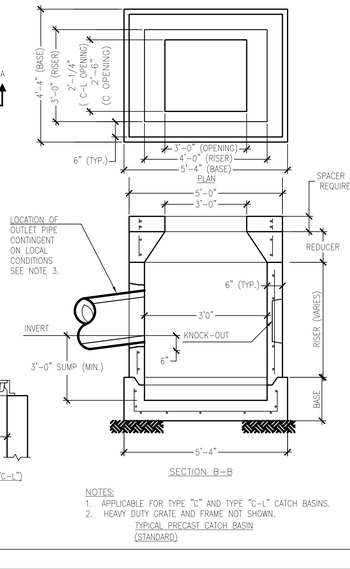


NOTES:
1. SYSTEM SHALL INCLUDE INSPECTION PORTS AT ALL ENTRANCES AND EXITS TO/FROM THE SYSTEM. INSPECTION PORT DETAILS PER MANUFACTURER'S RECOMMENDATIONS.
2. SYSTEM DESIGN SHALL INCLUDE ALL HEADERS, CONNECTIONS, ETC.
3. CONTRACTOR TO PROVIDE FULL SYSTEM DESIGN BY MANUFACTURER TO ENGINEER FOR REVIEW/APPROVAL

8 UNDERGROUND RETENTION SYSTEM TYPICAL SECTION
SCALE: N.T.S.



NOTES:
1. MASONRY CATCH BASIN SHOWN,
2. PRECAST CATCH BASIN SIMILAR. SEE STANDARD CATCH BASIN DETAIL FOR ADDITIONAL INFORMATION.

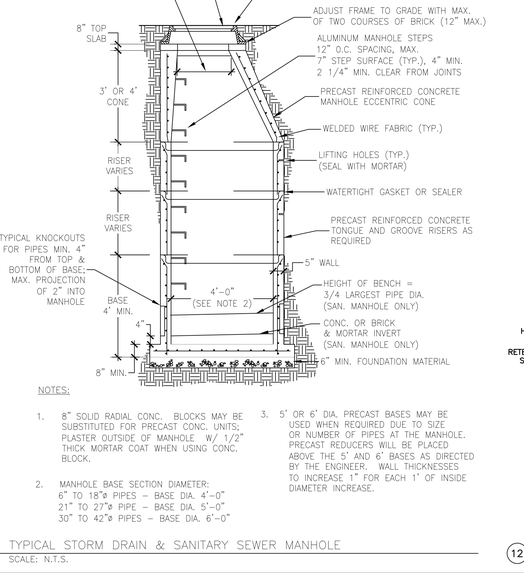


NOTES:
1. APPLICABLE FOR TYPE "C" AND TYPE "C-L" CATCH BASINS.
2. HEAVY DUTY GRATE AND FRAME NOT SHOWN.

TYPICAL PRECAST CATCH BASIN (STANDARD)

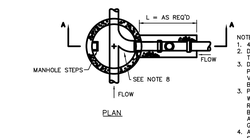
10 TYPE 'C' AND 'C-L' CATCH BASIN
NOT TO SCALE

NOTES:
1. ALL PRECAST SECTIONS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE, INCLUDING THE SUMP. REINFORCING SHALL CONFORM TO ASTM A615, GRADE 40 OR BETTER. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. HS 20 LOADING.
2. COMPACTION AROUND ALL STRUCTURES TO BE HAND TAMPED IN ACCORDANCE WITH SECTION 2.05 OF CONNDOT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, LATEST EDITION.
3. UNREINFORCED PIPES SHALL BE CUT FLUSH WITH INSIDE FACE OF C.B. WALL. REINFORCED PIPES SHALL BE CUT TO PROVIDE 1" RECESS INTO FACE OF C.B. WALL. CUT END SHALL THEN BE PATCHED WITH MORTAR FLUSH WITH WALL.
4. ALL UNUSED KNOCK-OUTS SHALL BE BRICKED UP WHERE DIRECTED BY THE ENGINEER.
5. TYPE "C" CATCH BASIN HEAVY DUTY FRAME AND GRATE TO BE CAMPBELL FOUNDRY CO. NO. 2633 OR ENGINEER APPROVED EQUAL.
6. TYPE "C-L" CATCH BASIN HEAVY DUTY FRAME AND GRATE TO BE CAMPBELL FOUNDRY CO. NO. 3404 OR ENGINEER APPROVED EQUAL.
7. FOR OUTLET PIPES 18"I.D. OR SMALLER C.B. TRAPS TO BE CAMPBELL FOUNDRY NO. 2564 OR ENGINEER APPROVED EQUAL. FOR LARGER PIPES, LARGER TRAPS SHALL BE USED, SUBJECT TO THE APPROVAL OF THE ENGINEER. TRAPS SHALL BE HUNG FROM TWO 1/2" SQUARE STAINLESS STEEL HANGER HOOKS EMBEDDED IN WALL OF C.B.

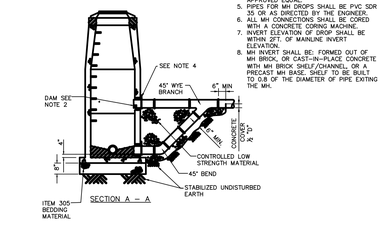


NOTES:
1. 8" SOLID RADIAL CONC. BLOCKS MAY BE SUBSTITUTED FOR PRECAST CONC. UNITS; PLASTER OUTSIDE OF MANHOLE W/ 1/2" THICK MORTAR COAT WHEN USING CONC. BLOCK.
2. MANHOLE BASE SECTION DIAMETER: 6" TO 18"ø PIPES - BASE DIA. 4'-0" 21" TO 27"ø PIPE - BASE DIA. 5'-0" 30" TO 42"ø PIPES - BASE DIA. 6'-0"
3. 5' OR 6' DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE. PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' AND 6' BASES AS DIRECTED BY THE ENGINEER. WALL THICKNESSES TO INCREASE 1" FOR EACH 1' OF INSIDE DIAMETER INCREASE.

11 TYPICAL STORM DRAIN & SANITARY SEWER MANHOLE
SCALE: N.T.S.

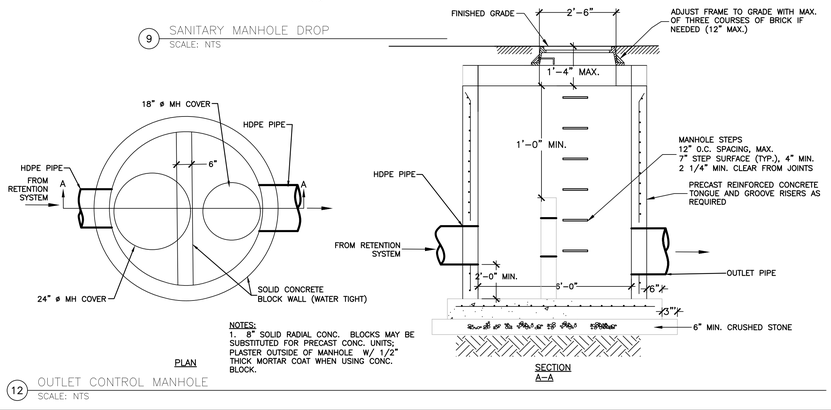


NOTES:
1. 4FT MH DIAMETER (MIN)
2. DROP PIPE TO BE THE SAME DIAMETER AS THE SEWER MAIN.
3. DAMS FOR PVC PIPE SHALL BE A HALF PLUG AFFIXED W/ EPOXY. DAMS FOR DI, VC AND RC PIPE SHALL BE MORTAR AND BRICK.
4. PIPE CONNECTIONS THROUGH EXISTING MH WALLS SHALL BE MADE W/ GROUTING RING (MS WATERTOP) AS MANUFACTURED BY PRESS-SEAL GASKET CORPORATION OR APPROVED EQUAL AND NON-SHRINK GROUT.
5. ALL PIPE CONNECTIONS TO NEW MH WALLS SHALL BE CAST-IN FLEXIBLE WATERTIGHT CONNECTORS MANUFACTURED BY PRESS-SEAL GASKET CORPORATION OR APPROVED EQUAL.
6. PIPES FOR DROPS SHALL BE PVC SDR 35 AS DIRECTED BY THE ENGINEER.
7. ALL MH CONNECTIONS SHALL BE CORED WITH A CONCRETE CORING MACHINE.
8. INVERT ELEVATION OF DROP SHALL BE WITHIN 2FT. OF MAINLINE INVERT ELEVATION.
9. MH INVERT SHALL BE: FORMED OUT OF MH BRICK, OR CAST-IN-PLACE CONCRETE WITH MH BRICK SHELF/CHANNEL, OR A PRECAST MH BASE. SHELF TO BE BUILT TO O.D OF THE DIAMETER OF PIPE EXITING THE MH.



DROP SANITARY MANHOLE
2 FT. - 5 FT. DROP
NTS

9 SANITARY MANHOLE DROP
SCALE: NTS



NOTES:
1. 8" SOLID RADIAL CONC. BLOCKS MAY BE SUBSTITUTED FOR PRECAST CONC. UNITS; PLASTER OUTSIDE OF MANHOLE W/ 1/2" THICK MORTAR COAT WHEN USING CONC. BLOCK.

12 OUTLET CONTROL MANHOLE
SCALE: NTS

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

CERTIFICATION:

CONSULTANT:

Stantec

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55 Church Street, Suite 601
New Haven, CT
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Tel. 203.495.1645
Fax. 203.495.1652
www.stantec.com

REVISIONS:

DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

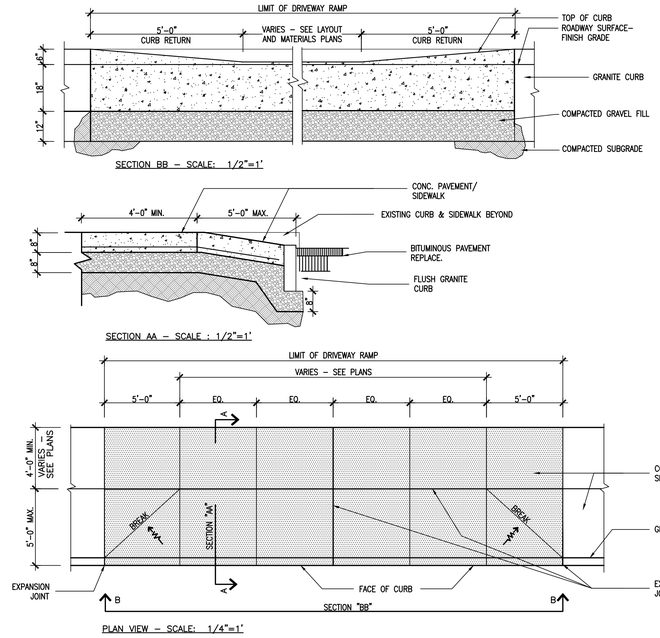
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
SITE DETAILS 01

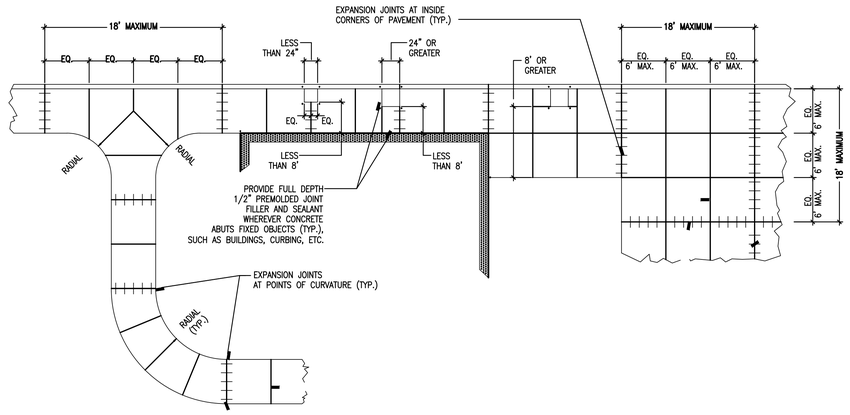
SCALE:	DRAWN BY:	REVIEWED BY:
AS NOTED	---	---

DRAWING NO.
C-301

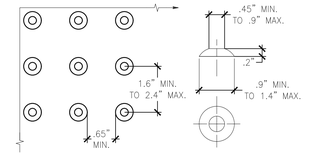
DATE: 10 JANUARY 202015050
JOB NUMBER:



1 CONCRETE APRON
SCALE: NTS

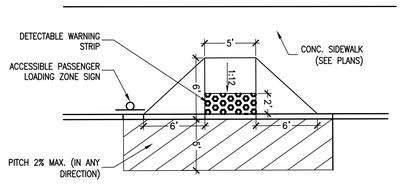


2 TYPICAL JOINT PLACEMENT IN CONCRETE
SCALE: NOT TO SCALE

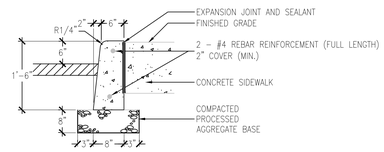


NOTE: DETECTABLE WARNING SURFACE TO CONFORM WITH CTDOT FORM 817 REQUIREMENTS

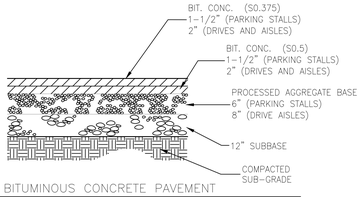
3 DETECTABLE WARNING SURFACE
SCALE: N.T.S.



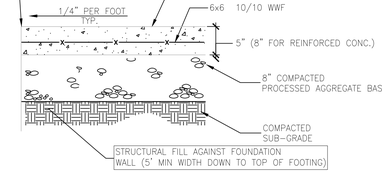
10 ACCESSIBLE PASSENGER LOADING ZONE
SCALE: NTS



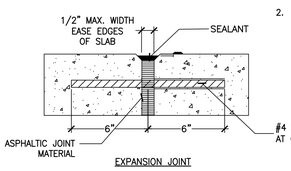
4 PRECAST CONCRETE CURB
SCALE: NTS



5 BITUMINOUS CONCRETE PAVEMENT
SCALE: NTS



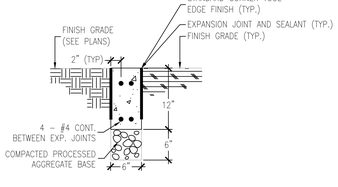
6 CONCRETE PAVEMENT/SIDEWALK
SCALE: NTS



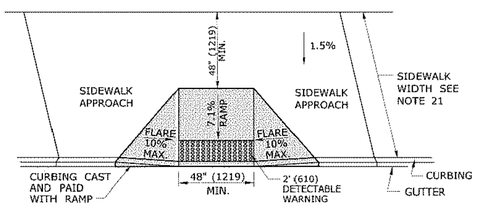
NOTES:
1. NO REINFORCING SHALL PASS THROUGH EXPANSION JOINTS EXCEPT FOR REBAR AS SHOWN.
2. LOCATE CONTROL JOINTS 5'-0" O.C. MAX.

7 CONCRETE PAVEMENT - EXPANSION & CONTROL JOINTS
SCALE: NTS

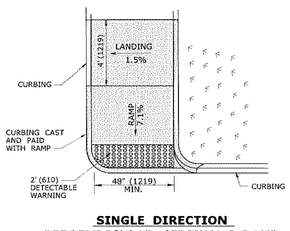
NOTE:
PROVIDE EXPANSION JOINT WHERE CURB MEETS CONCRETE PAVEMENT.



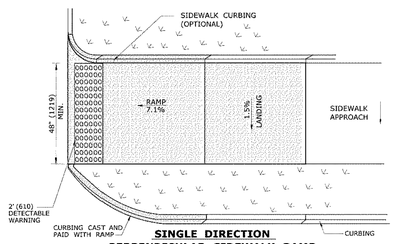
8 FLUSH CONCRETE CURB
SCALE: NTS



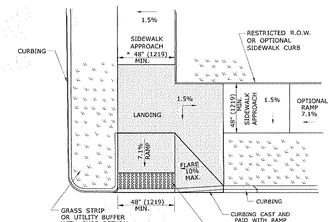
PERPENDICULAR SIDEWALK RAMP
W/ 48" (1219) MIN. BY PASS LANDING (TYPE 2)



SINGLE DIRECTION
PERPENDICULAR SIDEWALK RAMP
NO / UTILITY GRASS STRIP
(TYPE 4a)



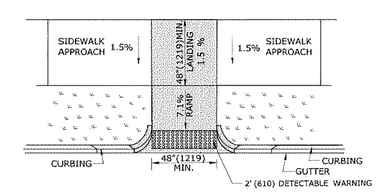
SINGLE DIRECTION
PERPENDICULAR SIDEWALK RAMP
W/ UTILITY GRASS STRIP (TYPE 4e)
REFER TO DETECTABLE WARNING PLACEMENT



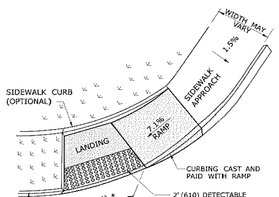
RESTRICTED CORNER PERPENDICULAR SIDEWALK RAMP
(TYPE 5)
* SEE NOTE 19

GENERAL NOTES:

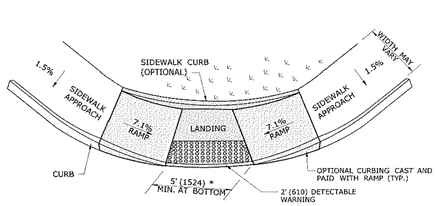
1. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE SIDEWALK RAMP SHOULD NOT EXCEED 5% THE MAXIMUM GRADE DIFFERENCE BETWEEN THE GUTTER AND CURB RAMP SHALL NOT EXCEED 13% SEE DETAIL 1 ON.
2. RAMP GRADE SHALL BE UNIFORM, FREE OF SAGS AND ABRUPT GRADE CHANGES. RUNNING SLOPES OF RAMPS SHALL NOT EXCEED 8.33% AND SHALL NOT EXCEED 15' (4.5m) WITHOUT PROVIDING A LANDING.
3. ALL RAMPS SHALL BE CONSTRUCTED OF CLASS "P" CONCRETE IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS.
4. SIDEWALK RAMPS SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP. THE SURFACE OF ALL SIDEWALK RAMPS SHALL BE STABLE, FIRM AND SLIP RESISTANT. SURFACE DISCONTINUITIES SHALL NOT EXCEED ¼" (13) MAX. VERTICAL DISCONTINUITIES BETWEEN ¼" (6.4) AND ½" (13) MAX. SHALL BE BEVELED 1:2 MINIMUM APPLIED ACROSS THE ENTIRE LEVEL CHANGE.
5. DIAGONAL SIDEWALK RAMPS AT MARKED CROSSINGS IS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES. DIAGONAL AND PERPENDICULAR RAMPS SHALL HAVE THE RAMP CUT PERPENDICULAR TO THE TANGENT OF THE CURB RADIUS FOR THE DESIGNATED ACCESSIBLE ROUTE. BOTH LONGITUDINAL SIDES OF THE LAMP SHOULD BE THE SAME LENGTH. SKEWED RAMPS SHOULD BE AVOIDED. FLARES ARE NOT CONSIDERED PART OF PEDESTRIAN ACCESS ROUTE. DIAGONAL RAMPS SHOULD NOT BE INSTALLED WHERE CURB RADIUS LESS THAN 20'(6096).
6. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION OR CONTRACT ON JOINT. 8.3% MAXIMUM SLOPE MAY NOT BE ACHIEVABLE DUE TO EXISTING SIDEWALK GRADE. IN RECOGNITION OF THIS, A LIMIT OF 5' (1672) FOR REMOVAL SHALL BE USED UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. SAW CUT REQUIRED FOR DUMMY JOINTS SHALL BE INCLUDED IN THE COST OF "CONCRETE SIDEWALK RAMP" OR "CONCRETE SIDEWALK".
7. EXPANSION JOINTS IN CONCRETE SHALL MATCH THOSE IN ADJACENT SIDEWALKS BUT IN NO CASE SHALL THE SPACING BE TWEEN EXPANSION JOINTS EXCEED 12' (3658) UNLESS OTHERWISE NOTED.
8. CONCRETE SIDEWALK RAMPS, SHALL BE PAID FOR UNDER THE ITEM "CONCRETE SIDEWALK RAMP", AS DEFINED BY THE CONSTRUCTION LIMITS ON THE PLANS AND SHALL BE FIELD VERIFIED.
9. SIDEWALK RAMP SHALL BE CONSTRUCTED WITH THE TOE AT THE GUTTER CAST INTEGRALLY WIT RAMP UNLESS DIRECTED OTHERWISE BY THE ENGINEER. CURB REMOVAL AND CAST IN PLACE CURBING REQUIRED FOR THE RAMP, SHALL BE INCLUDED WITH PAY ITEM "CONCRETE SIDEWALK RAMP". CURBING OUTSIDE LIMITS OF RAMP OR LANDING SHALL BE CONSTRUCTED AND PAID FOR IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS.
10. PREFERRED LOCATION TONSTALL DETECTABLE WARNING STRIP SHALL BE 6" (152) FROM THE EDGE OF ROAD ALONG THE FULL WIDTH OF THE RAMP. FOR ALTERNATE LOCATIONS, REFER TO DETECTABLE WARNINGS PLACEMENT DETAIL.
11. TO PERMIT WHEELCHAIR WHEELS TO ROLL BETWEEN DOMES, ALIGN DOMES ON A SQUARE GRID IN THE DIRECTION OF RUNNING SLOPE (PERPENDICULAR TO CURB OR SLOPE BREAK). THE TRANSIT ON FROM RAMP TO GUTTER SHALL BE FLUSH WITHOUT A LIP.
12. WHERE COMMECIAL DRIVEWAYS ARE PROVIDED WITH TRAFFIC SIGNALS AND THE SIDEWALK IS CONTINUOUS THROUGH DRIVEWAY, DETECTABLE WARNINGS ARE REQUIRED AT THE JUNCTION BETWEEN THE PEDESTRIAN ROUTE AND DRIVEWAY.
13. CONSTRUCT A SIDEWALK CURB WHEN THERE IS INSUFFICIENT BUFFER AVAILABLE TO GRADE OR WHEN CALLED FOR IN PLANS. PAID FOR IN SIDEWALK RAMP WHEN REQUIRED FOR RAMP.
14. THE TOP AND BOTTOM OF RAMPS SHOULD BE PROVIDED WITH A 4' X 4' (1219 X1219) MINIMUM LEVEL LANDING AREA WITH A CROSS SLOPE LESS THAN OR EQUAL TO 2 % IN ANY DIRECTION.
15. UTILITY POLES, LUMINAIRE, PEDESTRIAN OR SIGNAL POLES, GRATES, ACCESS COVERS, AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON RAMPS, LANDINGS, BLENDED TRANSITIONS, AND GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.
16. APPROACH SIDEWALK WIDTHS, GRASS STRIP OR UT LITY STRIP WIDTHS MAY VARY.
17. APPROACH SIDEWALK AND LANDING CROSS SLOPE SHALL NOT EXCEED 2%.
18. THE RUNNING OR CROSS SLOPES ON LANDINGS AT MID BLOCK CROSSING MAY BE WARPED TO MEET STREET OR HIGHWAY GRADE.
19. FOR PERPENDICULAR CURB RAMPS A MIN. 4'(1.2m) x 4'(1.2m) LEVEL LANDING SHALL BE PROVIDED AT THE TOP OF CURB RAMP. WHERE THE LEVEL LANDING IS RESTRICTED AT THE BACK OF SIDEWALK THE LEVEL LANDING SHALL BE 4' (1.2M) X 5' (1.5m) WITH THE 5' (1. 5 m) DIMENSION PROVIDED IN THE DIRECTION OF THE RAMP RUN.
20. FOR PARALLEL CURB RAMPS, A MIN. 4'(1.2m) x 4'(1.2m) LEVEL LANDING SHALL BE PROVIDED AT THE BOTTOM OF CURB RAMP. IF THE LEVEL LANDING IS RESTRICTED ON 2 OR MORE SIDES, THE LEVEL LANDING SHALL BE 4'(1.2m) X 5'(1.5m) WITH THE 5' (1.5m) DIMENS ON PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.
21. WHEN WIDTH OF SIDEWALKS IS =48" AND A PERPENDICULAR SIDEWALK RAMP IS INSTALLED, THE FLARED SIDES SHALL BE 10 % MAX. IF WIDTH OF SIDEWALK IS =48" THE FLARED SIDES MUST NOT EXCEED 8.33% (12:1).
22. SHADED AREAS ARE TYPICAL PAY LIMITS FOR CONCRETE SIDEWALK RAMP BUT MAY VARY AS DIRECTED BY THE ENGINEER.
23. OPTIONAL RAMP, WHEN REQUIRED, SHALL BE PAID FOR AS PART OF CONCRETE SIDEWALK RAMP.



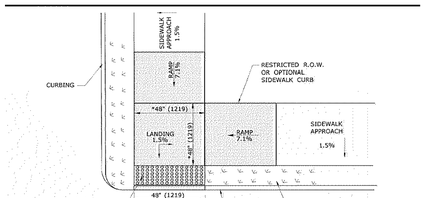
PERPENDICULAR SIDEWALK RAMP
W/CURB RETURNS / UTILITY GRASS STRIP (TYPE 2a)
* OPTIONAL FLARE ONE SIDE OF RAMP



SINGLE PARALLEL SIDEWALK RAMP
W/LANDING AT BOTTOM ON CORNER (TYPE 4c)
* SEE NOTE 20



DOUBLE PARALLEL SIDEWALK RAMP
W/LANDING AT BOTTOM ON CORNER (TYPE 4f)
* SEE NOTE 20



RESTRICTED CORNER PARALLEL DOUBLE SIDEWALK RAMPS
W/CENTER LANDING AND UTILITY GRASS STRIP
(TYPE 5a)
* SEE NOTE 20

9 CONCRETE SIDEWALK RAMP
SCALE: NTS

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www.stantec.com

REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

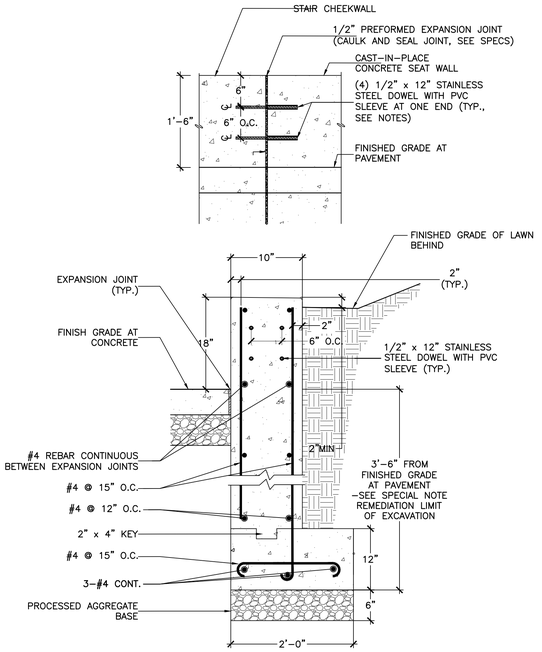
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
SITE DETAILS 02

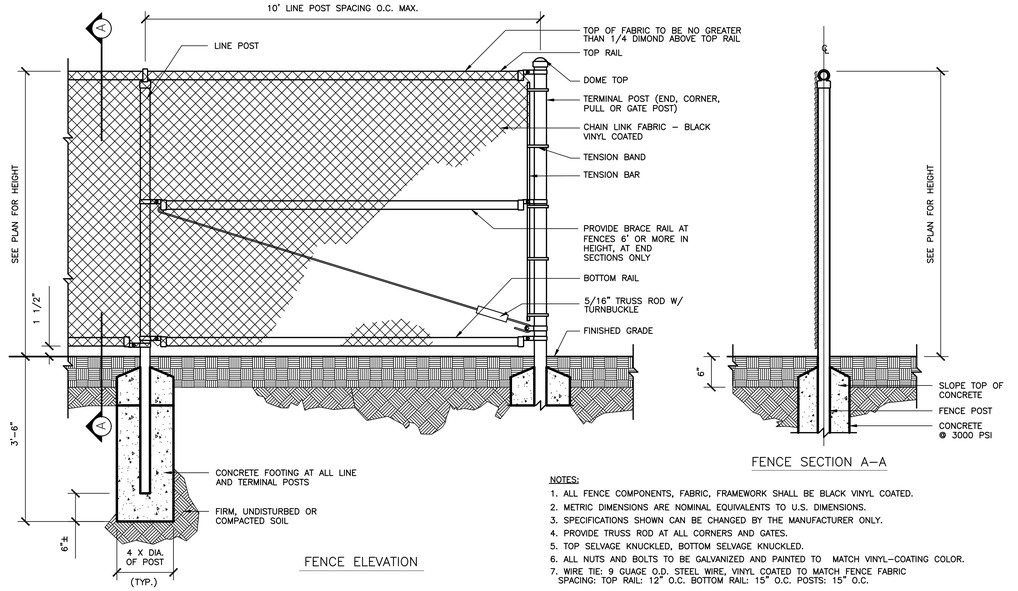
SCALE:	DRAWN BY:	REVIEWED BY:
AS NOTED	---	---

DRAWING NO.
C-302

DATE: 10 JANUARY 2020
JOB NUMBER: 15050



1 CONCRETE SEAT WALL
SCALE: NTS

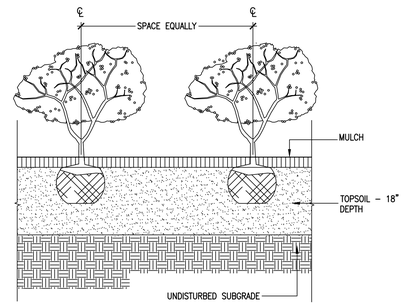


FENCE ELEVATION

FENCE SECTION A-A

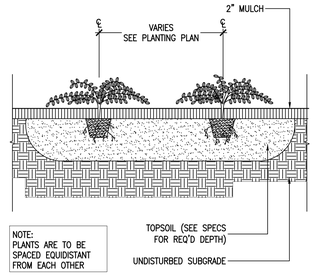
NOTES:
1. ALL FENCE COMPONENTS, FABRIC, FRAMEWORK SHALL BE BLACK VINYL COATED.
2. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
3. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
4. PROVIDE TRUSS ROD AT ALL CORNERS AND GATES.
5. TOP SELVAGE KNUCKLED, BOTTOM SELVAGE KNUCKLED.
6. ALL NUTS AND BOLTS TO BE GALVANIZED AND PAINTED TO MATCH VINYL-COATING COLOR.
7. WIRE TIE: 9 GUAGE O.D. STEEL WIRE, VINYL COATED TO MATCH FENCE FABRIC SPACING: TOP RAIL: 12" O.C. BOTTOM RAIL: 15" O.C. POSTS: 15" O.C.

2 CHAIN-LINK FENCE
SCALE: NTS

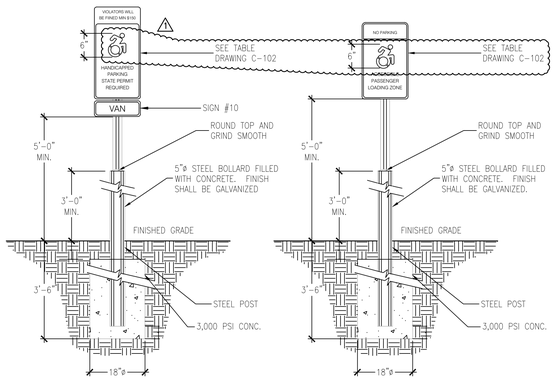


NOTE: PLANTS ARE TO BE SPACED EQUIDISTANT FROM EACH OTHER

3 SHRUB PLANTING
SCALE: NTS

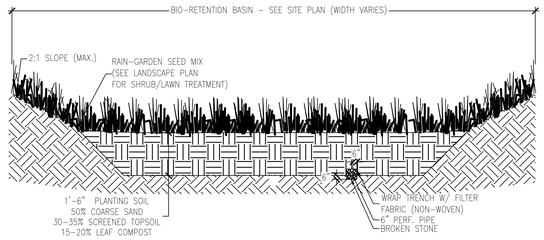


4 GROUNDCOVER PLANTING
SCALE: NTS

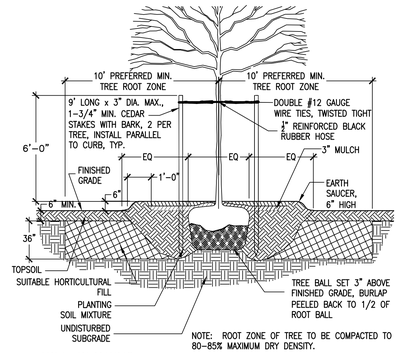


NOTE: LATEST ADA SIGNAGE SHALL BE USED

5 ACCESSIBLE PARKING SIGN/ACCESSIBLE PASSENGER LOADING ZONE SIGN
SCALE: N.T.S.

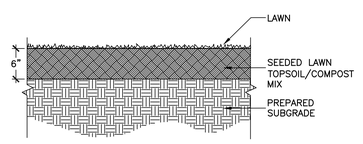


6 TYPICAL BIO-RETENTION AREA
NOT TO SCALE



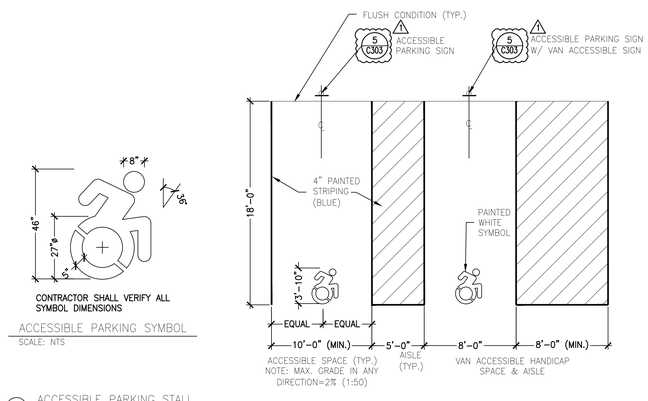
NOTE: ROOT ZONE OF TREE TO BE COMPACTED TO 80-85% MAXIMUM DRY DENSITY.

7 TREE PLANTING
SCALE: NTS



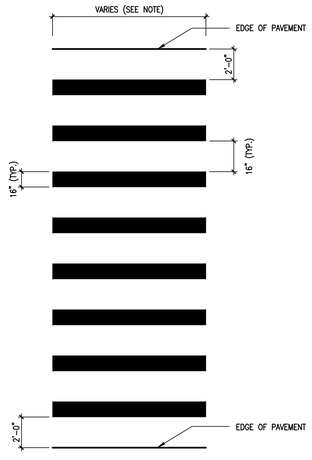
NOTE: CONTRACTOR SHALL FOLLOW SPECIFICATIONS FOR SEEDING, WATERING, AND OTHER GENERAL REQUIREMENTS AS THEY RELATE TO LAWN ESTABLISHEMENT IN ORDER TO OBTAIN FINAL ACCEPTANCE OF ALL LAWN AREAS ON SITE.

8 SEEDED LAWN
SCALE: NTS

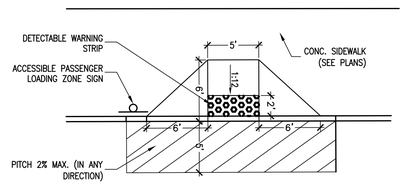


ACCESSIBLE PARKING SYMBOL
SCALE: NTS

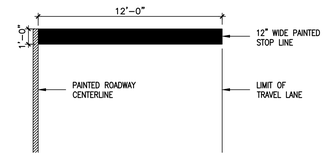
9 ACCESSIBLE PARKING STALL
SCALE: NTS



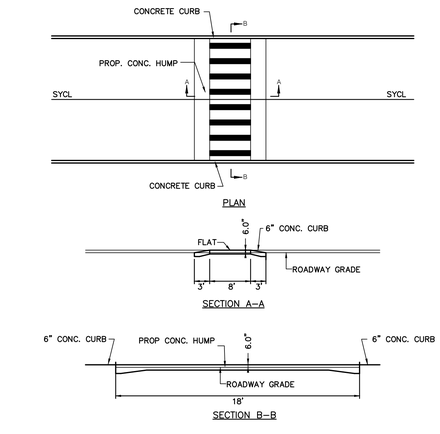
10 LADDER BAR CROSSWALK
SCALE: N.T.S.



11 ACCESSIBLE PASSENGER LOADING ZONE
SCALE: NTS



12 12" PAINTED STOP BAR
SCALE: 1/4" = 1'-0"



13 RAISED CROSSWALK
SCALE: NTS

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

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Stantec

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REVISIONS:

	DATE	DESCRIPTION
1	01/15/20	CODE REVIEW COMMENTS

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
SITE DETAILS 03

SCALE:	DRAWN BY:	REVIEWED BY:
AS NOTED	---	---

DRAWING NO.
C-303

DATE: 10 JANUARY 2020
JOB NUMBER: 15050

.hess

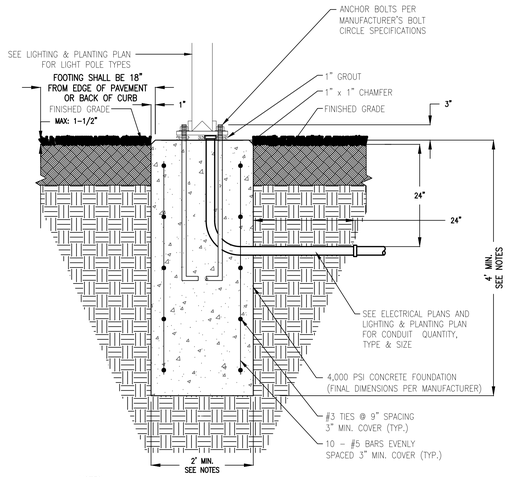
LINEA LED Specification

The simple linear form of LINEA combined with LED illumination provides a synergy of form and function. High-power LEDs provide a wide asymmetric distribution while generating no light above ninety degrees horizontal. Bollard housing and shaft are single-piece and finished in finely textured paint. All hardware is stainless steel. Standard colors; matte silver grey metallic or graphite grey. Special colors available.
CSA/US Certified for Wet Locations

Model	Lamp	Color Temperature	Volt	Mounting	Pole	Finish	Option
	LED - Standard		UNV -				DIM - 0-10vDC
LN950	output	WW -3000K	120-277V	D - Bollard	03SRA - 3' Straight Rectangular Aluminum	DG - Dark Grey	Dimming
	HP/LED - High output	NW - 4000K				GG - Graphite Grey	EF - External Flange
						SG - Silver Grey	N - None
						CC - Custom Color	
Ordering Information							
LN950			**UNV**	**D**	**03SRA**		

Specifications are subject to change without notification
HessAmerica › Products › Lighting Products › Illuminating Bollard › LINEA
http://www.hessamerica.com/Products/Lighting/Illuminating_Bollard/LINEA__/
Page 1

1 BOLLARD LIGHT
SCALE: N.T.S.



NOTES:
1. SEE ELECTRICAL PLANS FOR GROUNDING ROD/WIRING
2. CONTRACTOR TO SUBMIT SIGNED/SEALED CALCULATIONS IF HEIGHT SUBSTITUTION IS PROPOSED
3. FOOTING SHALL EXTEND 3" ABOVE GRADE FOR PAVEMENT INSTALLATIONS

2 LIGHT POLE FOOTING
SCALE: N.T.S.

VICTOR STANLEY® *Create a timeless moment.®*

RB-36

A 36 gal (136 L), tastefully flared litter receptacle. This beautifully tapered receptacle offers Ironsites® style and durability at an extraordinary value. Also available as models RB-24: 24 gal (90 L) and RB-45: 45 gal (170 L) capacities.

Standard tapered formed lid. Bottom recessed pedestal.

STANDARD

All fabricated metal components are steel shotblasted, etched, phosphatized, preheated and electrostatically powder-coated with TGIC polyester powder coatings.

Other standard features include a formed lid attached to the frame with two vinyl-coated steel aircraft cables, a high-density plastic liner, and rubber-tipped leveling feet on the base.

Interior plastic liners for our litter receptacles offer substantial value and are produced on molds that we designed and own. These plastic cans are reinforced, ribbed, and molded for durability, ease of use, and greater capacity.

OPTIONS

RETURN TO STANDARD VIEW

FEATURES

Bottom Recessed Pedestal

Tapered .375 x 1 in (10 x 25 mm) Bars

MATERIAL

Recycled Solid Steel Bar

TOP BAND

2-1/2 in (64 mm)

TOP RING

3 TRASH RECEPTACLE
SCALE: N.T.S.

.hess

LINEA 450 LED Specification

The LINEA series features distinctly linear design qualities and exceptional versatility. Perceptively capturing today's minimal design philosophy, the reduced form is sure to retain its validity far into the future. It is available in three mounting heights in single or twin mounting configurations. The pedestrian-scale model is 15 feet, with intermediate and larger sizes at 20 and 26 feet, respectively, giving proper scale for a variety of applications. Units for bi-level mounting are available, where the street-side luminaire is mounted high and a second fixture is mounted on the sidewalk side at a lower height for pedestrian illumination. An LED illuminating bollard for low-level pathway illumination complements the family of products. CSA Listed for Wet Locations

Model	LED Module	Color Temperature	Distribution	Volt	Mounting	Pole	Pole Mat	Finish	Option
	2LV - 2 LEVO			UNV -	A - Single	15SR - 15' Straight		SG - Silver	DIM - 0-10vDC
LN450	Modules	WW -3000K	ME - Type III	120-277V	Mount	Rectangular	A - Alum	Grey	Dimming
		NW - 4000K	S - Type II		B - Twin Mount	X - Other (specify)	S - Steel	GG - Graphite Grey	N - None
								CC - Custom Color	
Ordering Information									

Specifications are subject to change without notification
HessAmerica › Products › Lighting Products › Pole Mounted Luminaire › LINEA
http://www.hessamerica.com/Products/Lighting/Pole_Mounted_Luminaire/LINEA/
Page 1

4 LIGHT FIXTURE & POLE – TYPE SL1, SL2 & SP1
SCALE: N.T.S.

VICTOR STANLEY® *Create a timeless moment.®*

RM-12

Strong, straight lines. Flat armrests.

6 ft (1.8 m) length. Steel slats. Surface mount tabs.

STANDARD

All fabricated metal components are steel shotblasted, etched, phosphatized, preheated and electrostatically powder-coated with TGIC polyester powder coatings.

RETURN TO STANDARD VIEW

MATERIAL

Recycled Solid Steel Bar

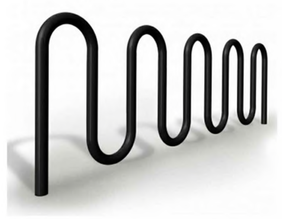
COLORS

Standard

Optional RAL

5 BENCH
SCALE: N.T.S.

VICTOR STANLEY® *Create a timeless moment.®*



BRCS-109

Nine loop bike rack constructed of 2.375 in (60 mm) OD tubular steel pipe.

CAPACITY

11 bikes.

STANDARD

All fabricated metal components are steel shotblasted, etched, phosphatized, preheated and electrostatically powder-coated with TGIC polyester powder coatings.

OPTION

Powder coat over galvanized finish. Surface mount. In-ground mount.

RETURN TO STANDARD VIEW

MATERIAL

Tubular Steel

CAPACITY

11 Bikes

COLORS

Standard

6 BIKE RACK
SCALE: N.T.S.

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

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REVISIONS:

	DATE	DESCRIPTION

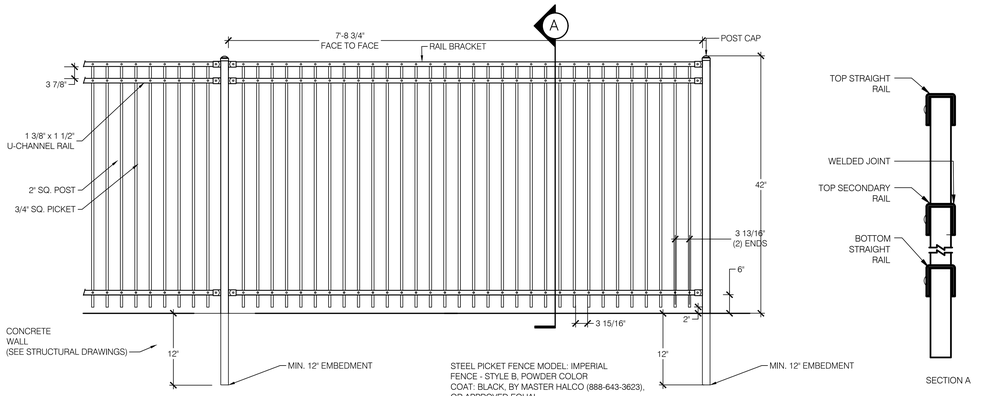
ADDITIONS & RENOVATIONS
NEW LONDON HIGH SCHOOL
PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
SITE DETAILS 04

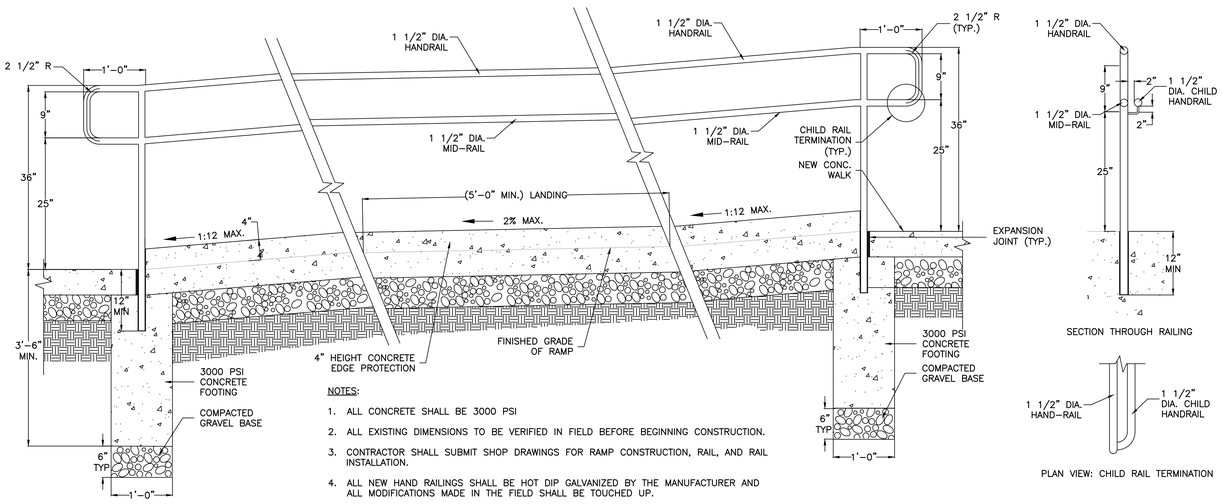
SCALE:	DRAWN BY:	REVIEWED BY:
AS NOTED	---	---

DRAWING NO.
C-304

DATE: 10 JANUARY 2020
JOB NUMBER: 15050



1 ORNAMENTAL STEEL FENCE
SCALE: 1" = 1'-0"



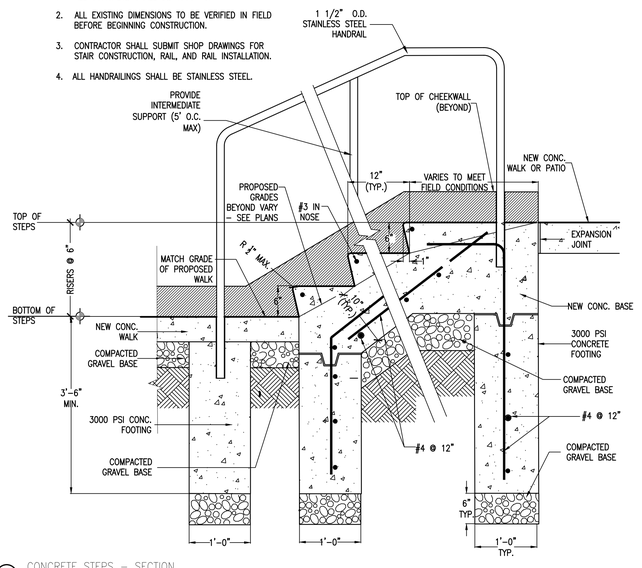
NOTES:

1. ALL CONCRETE SHALL BE 3000 PSI
2. ALL EXISTING DIMENSIONS TO BE VERIFIED IN FIELD BEFORE BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR RAMP CONSTRUCTION, RAIL, AND RAIL INSTALLATION.
4. ALL NEW HAND RAILINGS SHALL BE HOT DIP GALVANIZED BY THE MANUFACTURER AND ALL MODIFICATIONS MADE IN THE FIELD SHALL BE TOUCHED UP.
5. RAILINGS TO BE INSTALLED ON BOTH SIDES OF RAMP
6. MINIMUM POST SPACING SHALL BE 4' O.C.

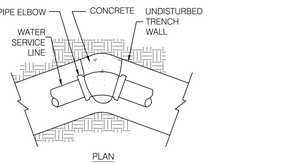
2 CONCRETE STEPS – SECTION
SCALE: 1" = 1'-0"

NOTES:

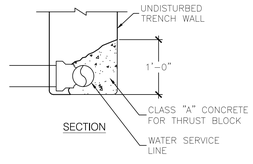
1. ALL CONCRETE SHALL BE 4500 PSI
2. ALL EXISTING DIMENSIONS TO BE VERIFIED IN FIELD BEFORE BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR STAIR CONSTRUCTION, RAIL, AND RAIL INSTALLATION.
4. ALL HANDRAILINGS SHALL BE STAINLESS STEEL.



3 CONCRETE STEPS – SECTION
SCALE: N.T.S.

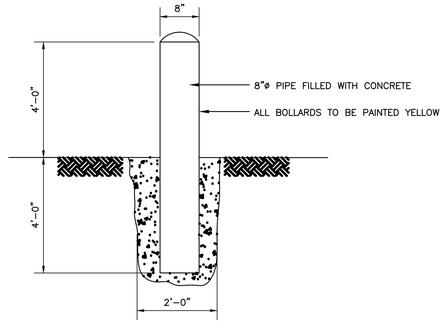


PLAN



SECTION

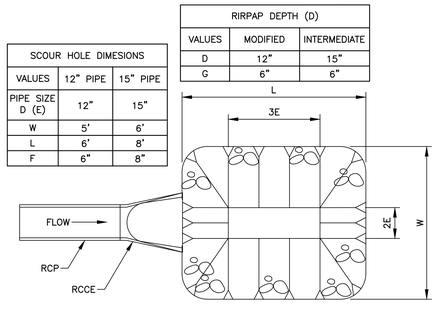
4 TYPICAL THRUST BLOCK DETAIL
SCALE: NTS



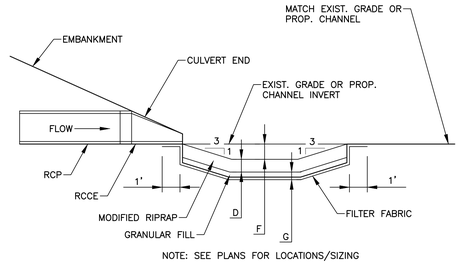
5 CONCRETE BOLLARD
SCALE: N.T.S.

SCOUR HOLE DIMESIONS		
VALUES	12" PIPE	15" PIPE
PIPE SIZE D (E)	12"	15"
W	5'	6'
L	6'	8'
F	6"	8"

RIRPAP DEPTH (D)		
VALUES	MODIFIED	INTERMEDIATE
D	12"	15"
G	6"	6"



PLAN



NOTE: SEE PLANS FOR LOCATIONS/SIZING

SECTION

6 PERFORMED SCOUR HOLE
SCALE: NTS

ANTINOZZI ASSOCIATES
ARCHITECTURE & INTERIORS

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www.stantec.com

REVISIONS:

	DATE	DESCRIPTION

ADDITIONS & RENOVATIONS NEW LONDON HIGH SCHOOL

PHASE 3: CONSTRUCTION DOCUMENTS
JEFFERSON AVENUE & CHESTER STREET NEW LONDON, CT 06320
STATE PROJECT #095-0090 MAG/N

DRAWING TITLE:
SITE DETAILS 05

SCALE:	DRAWN BY:	REVIEWED BY:
AS NOTED	---	---

DRAWING NO.
C-305

DATE: 10 JANUARY 2020
JOB NUMBER: 15050

ATTACHMENT 5

Drainage Study

DRAINAGE STUDY

New London High School
Jefferson Avenue and Chester Street
New London, Connecticut

Prepared for:

City of New London

55 Church Street
New Haven, CT 06510-3014
Telephone: (203) 495-1645
Fax: (203) 495-1652

Project #192310898

July 12, 2019
Revised January 30, 2020

TABLE OF CONTENTS

LIST OF ATTACHMENTS

1.0 Executive Summary

The project involves the renovation and addition to New London High School in New London, CT. The site is comprised of approximately 49 acres and is located at the intersection of Jefferson Avenue and Chester Street.

Construction of the additions is expected to begin in the spring of 2020 and completed in the fall of 2021. Subsequent to the new construction, the renovations of the original building will take place in several distinct phases, and all this work will be completed in spring of 2023. The one-story shop wing (southeast of the building) will then be demolished and a service and parking loop will be built on the site behind the STEM component to provide an additional drop-off/pick-up point for students and to provide access to the custodial and food services areas of the building.

Along with the building improvements the existing parking lot to the west of the building will be reconstructed. New parking areas to the north and south of the building will also be constructed. Additionally, new utilities, landscaping and lighting improvements are proposed.

The City of New London requires that the project's stormwater management system be designed in accordance with the Connecticut Department of Transportation Drainage Manual and CTDEEP Stormwater Quality Manual. It also requires that the peak flows and volumes be reduced to below pre-construction conditions for the 2, 10, 25 and 100-year storm. The project will be designed in accordance with these requirements. The first inch of runoff over impervious surfaces will be retained on-site and infiltrated.

2.0 Existing Conditions

The existing conditions at the site consist of the school building and associated parking and driveway areas draining via catch basins to two separate outfalls (design points). Design point 1 is located at a manhole on-site located just north of the synthetic turf fields to the southeast of the STEM building. Design point 2 is a catch basin to the west of the track. No formal water quality measures exist at the site.

3.0 Proposed Conditions

Under proposed conditions, the project site will continue to drain to the same design points. A stormwater management system is proposed which will involves pipes, swales and catch basins, hydrodynamic separators, subsurface retention systems and bioretention areas.

Hydrodynamic separators (installed near the inlet of the subsurface retention systems and at other key junction points) are being proposed to improve the water quality before the storm runoff goes into the subsurface retention systems. Hydrodynamic separators are not installed at retention systems 1 and two since only roof flow is entering these systems.

4.0 Method of Evaluation

For proposed conditions, the site has been divided into several different drainage sub-catchments contributing to either a subsurface retention system a bio-retention area or to a design point without any attenuation (See Figure 2 in Attachment A). The two design points noted above have been established as locations to compare the existing and proposed peak flows.

HydroCAD computer program was used to size the subsurface retention systems and to evaluate existing condition and proposed condition peak flows and runoff volumes for the project (TR-55). Hydrologic soil groups 'B' and 'C' were used based on the soil properties (See NCRS Soil Survey Map in Attachment A). This parameter was utilized to select corresponding curve numbers to be used in the model.

The 24-hour rainfall distribution values were obtained from NOAA Atlas 14, Volume 10, Version 2 for the location of the school (Attachment B). A minimum time of concentration of 5 minutes was used for the calculations. The soils at the site are generally considered to be sandy in nature and therefore an infiltration rate of 0.45 was used. The geotechnical report for the project shows that there is ledge present at the site. The underground retention systems were placed at locations where there will be fill or where the ledge was found to be deep based on the boring information. Additional test pits will be taken in the near future to obtain more information on the subsoil conditions/location of ledge to fine tune the final location/design of the underground retention systems.

5.0 Retention Design

The proposed subsurface retention systems will be comprised of Stormtech SC-740 plastic chambers (or approved equal). The system is designed to attenuate the peak flows, maintain (to pre-development condition) or reduce the runoff volume and to store the required water quality volume. The system will have an open bottom thus allowing exfiltration of the water into the ground.

6.0 Water Quality

As required, the first one inch of precipitation over the site impervious areas must be retained on-site to recharge the water table (Water Quality Volume). The water quality volume proposed to be infiltrated at the site is 22,349 cubic feet (required volume is

21,127 cubic feet). This volume will be retained on-site in the subsurface retention systems and bioretention areas and exfiltrated into the ground.

In addition to the treatment provided by subsurface retention systems and the bioretention area, several hydrodynamic separators are being proposed at the site. These will be located just prior to storm water runoff entering the subsurface retention systems. The units will be sized to treat the required water quality flow and have been designed to remove 80% of the total suspended solids (TSS), along with miscellaneous debris that may be present in the runoff.

The methodology used for these calculations was based on the State of Connecticut DEP's Stormwater Quality Manual. A water quality summary table can be found at the end of this report.

7.0 Site Drainage System Design

StormCAD V8i computer program (Rational Method) was utilized to size the drainage system. 10-year storm and attenuated peak flow values from the TR-55 retention analysis were inserted into the StormCAD model to accurately size the piping system. A minimum time of concentration of 5 minutes was utilized. The piping was designed for the 10-year storm.

8.0 Stormwater Management Maintenance

Maintenance is a critical part of the performance of a storm water management system. The following is the suggested schedule for maintenance of the on-site storm water facilities at this site once construction is completed. The frequency of the scheduled inspections may be reviewed one year after all site improvements have been completed to determine if the frequency of the inspections and cleanings should be adjusted.

Catch basins, manholes, hydrodynamic separators:

Visually inspect twice a year for accumulated sediment, floatable debris, obstructions or erosion at outlets. Remove sediment when depth reaches 6 inches. Remove floatable debris during the inspection. Remove obstructions immediately.

Bioretention areas:

Inspect bioretention basin annually, at a minimum, and after heavy runoff events (e.g. >3.0" in a 24-hour period).

Remove litter and debris. Overseed any bare areas. Remove sediment deposits deeper than six inches from bioretention areas. Immediately reseed bare patches created by equipment. Small tracked or rubber-tired equipment is recommended for minimal impact from sediment removal.

Check draining time of bioretention basin twice annually (i.e. spring and fall). Check within 72 hours after a minimum one-inch rain event. If there is no standing water, infiltration is acceptable.
Bio-Retention areas shall be checked for invasive species on a yearly basis, typically once the growing season begins. Ideally invasive species are removed in the spring or early summer once the plants are established and large enough to remove but before any seeds are released. Removals of invasive species shall be done by mechanical means only, ie. by hand or with hand tools. When removals are being done, it is critical to remove as much of the roots as possible. All plants removed shall be bagged and disposed of in a legal way. No burning is allowed.

Underground Retention System:

Inspection ports are installed in the system so that the system can be inspected and cleaned as necessary. Inspections should be made twice a year initially and then the schedule can be modified based on the amount of sediment found in the chamber.

9.0 Conclusion

Low-impact environmental design is achieved by pre-treatment of storm water runoff prior to discharge and maximizing infiltration. The practices presented in this report are central to an effective design for storm water management and environmental resource protection.

It is concluded that the installation of the subsurface retention systems and bioretention areas will decrease the peak flows and run-off volume discharging from the project area. The installation of hydrodynamic separators and bioretention areas will significantly improve the water quality of the runoff from the site by filtering out sediment and floatables. No adverse effects to downstream drainage facilities are anticipated.

Summary Table 1: Peak Flows

Area	Peak Flow (cubic feet per second)			
	2-Year	10-Year	25-year	100-Year
Existing Conditions (DP1)	30.65	48.29	59.48	76.87
Proposed Conditions (DP1)	27.46	42.5	52.91	70.71
Existing Conditions (DP2)	9.62	17.93	23.37	32.28
Proposed Conditions (DP2)	6.3	14.91	19.64	32.27
Percent Reduction	16%	13%	12%	6%

Summary Table 2: Hydraulic Volume

Area	Volume (ac-ft)			
	2-Year	10-Year	25-year	100-Year
Existing Conditions (DP1)	1.756	2.834	3.524	4.602
Proposed Conditions (DP1)	1.484	2.529	3.281	4.482
Existing Conditions (DP2)	0.703	1.316	1.732	2.405
Proposed Conditions (DP2)	0.452	1.082	1.524	2.252
Percent Reduction	21%	13%	9%	4%

Summary Table 3: Water Quality

Area	Water Quality Volume (cubic feet)		Treated Water Quality Flow (cfs)	
	Required	Proposed*	Required	Proposed
UG 1	21,127	13,286	5.91	3.70 (HS72)**
Bioretention 1		1,138		0.15
Bioretention 2		7,925		3.70 (HS72)**
Total	**21,127**	**22,349**	**5.91**	**7.55**

***** Storage volume below weir elevations

** Hydrodynamic Separator Model for treatment (by Vortsentry or App. Equal)

ATTACHMENT A

Figure A: Site Location Map

Figure 1: Drainage Area Map – Existing Conditions

Figure 2: Drainage Area Map – Proposed Conditions

C-104/C-105: Grading and Drainage Plans

NOAA Atlas 14, Volume 10, Version 2 – Rainfall Data

NCRS Soil Data

APPENDIX A

Inspection Report Form

INSPECTION FORM

NEW LONDON HIGH SCHOOL
ADDITOINS & RENOVATIONS
490 Jefferson Ave
NEW LONDON, CT

Inspector Name:_____**Date**: _____

Inspection Type (Check): Weekly Storm Event Measured Rainfall_____(inches)

Weather Conditions: _____

_____

Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

_____
Signature

Area Inspected	Condition	In Compliance with Permit? (Y/N)	Description of Corrective Action or Maintenance Needed	Date Corrective Action Completed and Initials
Disturbed Areas				
Perimeter SEC Measures				
Stabilization Measures • Effective? • Good condition?				
Soil Stockpiles • Evidence of soil migration?				
Washout Areas				
Entrance/Exit • Evidence of sediment tracking?				

Catch Basins • Insert working properly? • Trash around grate?				

Additional Notes/Comments:

APPENDIX B

Stormwater Monitoring Report Form

Connecticut Department of
Energy & Environmental Protection
Bureau of Materials Management & Compliance Assurance
Water Permitting & Enforcement Division

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, issued 8/21/13, effective 10/1/13
Stormwater Monitoring Report

SITE INFORMATION

Permittee: _____

Mailing Address: _____

Business Phone: _____ ext.: _____ Fax: _____

Contact Person: _____ Title: _____

Site Name: _____

Site Address: _____

Receiving Water (name, basin): _____

Stormwater Permit No. GSN _____

SAMPLING INFORMATION (Submit a separate form for each outfall)

Outfall Designation: _____ Date/Time Collected: _____

Outfall Location(s) (lat/lon or map link): _____

Person Collecting Sample: _____

Storm Magnitude (inches): _____ Storm Duration (hours): _____

Size of Disturbed Area at any time: _____

MONITORING RESULTS

Sample #	Parameter	Method	Results (units)	Laboratory (if applicable)
1	Turbidity			
2	Turbidity			
3	Turbidity			
4	Turbidity			

(provide an attachment if more than 4 samples were taken for this outfall) Avg =

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: _____

Signature: _____ Date: _____

Please send completed form to:

DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE
79 ELM STREET
HARTFORD, CT 06106-5127
ATTN: NEAL WILLIAMS

APPENDIX C

Notice of Termination Form

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Notice of Termination Form

Please complete and submit this form in accordance with the general permit (DEP-PED-GP-015) in order to ensure the proper handling of your termination. Print or type unless otherwise noted.

Note: Ensure that for commercial and industrial facilities, registrations under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* (DEP-PED-GP-014) or the *General Permit for the Discharge of Stormwater from Commercial Activities* (DEP-PED-GP-004) have been filed where applicable. For questions about the applicability of these general permits, please call the Department at 860-424-3018.

Part I: Registrant Information

1. Permit number: ***GSN***
2. Fill in the name of the registrant(s) as indicated on the registration certificate:

   Registrant:
3. Site Address:

   City/Town: State: Zip Code:
4. Date all storm drainage structures were cleaned of construction sediment:

   Date of Completion of Construction:

   Date of Last Inspection (must be at least three months after final stabilization pursuant to Section 6(b)(6)(D) of the general permit):
5. Check the post-construction activities at the site (check all that apply):

   ☐ Industrial ☐ Residential ☐ Commercial ☐ Capped Landfill

   ☐ Other (describe):

Part II: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Signature of Permittee	Date
Name of Permittee (print or type)	Title (if applicable)

Note: Please submit this Notice of Termination Form to:

STORMWATER PERMIT COORDINATOR
BUREAU OF WATER MANAGEMENT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127